**TOSHKENT DAVLAT YURIDIK UNIVERSITETI HUZURIDAGI ILMIY DARAJALAR BERUVCHI DSc.07/30.12.2019.Yu.22.01 RAQAMLI ILMIY KENGASH**

**TOSHKENT DAVLAT YURIDIK UNIVERSITETI**

**TOJIBOYEV SARVAR ZAFAROVICH**

# KATTA RAQAMLI MA’LUMOTLARNI (BIG DATA) FUQAROLIK-HUQUQIY TARTIB SOLISH

12.00.03 – Fuqarolik huquqi. Tadbirkorlik huquqi.
Oila huquqi. Xalqaro xususiy huquq

**yuridik fanlar bo‘yicha falsafa doktori (PhD) dissertatsiyasi AVTOREFERATI**

**Toshkent – 2025**

**UDK: 347(043.5)(575.1)**

**Falsafa doktori (PhD) dissertatsiyasi avtoreferati mundarijasi**

**Content of the abstract of the dissertation of the Doctor of Philosophy**

**Оглавление автореферата диссертации доктора философии (PhD)**

**TOSHKENT DAVLAT YURIDIK UNIVERSITETI HUZURIDAGI ILMIY DARAJALAR BERUVCHI DSc.07/30.12.2019.Yu.22.01 RAQAMLI ILMIY KENGASH**

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**Falsafa doktori (PhD) dissertatsiyasi mavzusi O‘zbekiston Respublikasi Oliy ta’lim, fan va innovatsiyalar vazirligi huzuridagi Oliy attestatsiya komissiyasida B2024.3.PhD/Yu1534 raqam bilan ro‘yxatga olingan.**

Falsafa doktori dissertatsiyasi (PhD) Toshkent davlat yuridik universitetida bajarilgan.

Dissertatsiya avtoreferati uch tilda (o‘zbek, ingliz, rus (rezyume)) Ilmiy kengashning veb-sahifasida (www.tsul.uz) va «ZiyoNet» Axborot-ta’lim portalida (www.ziyonet.uz) joylashtirilgan.

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Dissertatsiya himoyasi Toshkent davlat yuridik universiteti huzuridagi DSc.07/30.12.2019.Yu.22.01 raqamli Ilmiy kengashning 2025-yil 5-sentabr kuni soat 10:00 dagi majlisida bo‘lib o‘tadi (Manzil: 100047, Toshkent shahar, Sayilgoh ko‘chasi, 35-uy. Tel.: (99871) 233-66-36 faks: (99871) 233-37-48, e-mail: info@tsul.uz).

Dissertatsiya bilan Toshkent davlat yuridik universiteti Axborot-resurs markazida tanishish mumkin (1414-raqam bilan ro‘yxatga olingan) (Manzil: 100047, Toshkent shahar, Amir Temur ko‘chasi, 13-uy. Tel.: (99871) 233-66-36).

Dissertatsiya avtoreferati 2025-yil 21-avgust kuni tarqatildi.

(2025-yil 21-avgustdagi 84-son reyestr bayonnomasi).

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## KIRISH (falsafa doktori (PhD) dissertatsiyasi annotatsiyasi)

**Dissertatsiya mavzusining dolzarbligi va zarurati.** Dunyoda XXI asrning oxirgi o‘n yilligi axborot texnologiyalari sohasida erishilgan ulkan yutuqlar bilan ajralib turuvchi bosqich sifatida qaralmoqda. Raqamli transformatsiya, sun’iy intellekt, avtomatlashtirilgan tizimlar va ayniqsa, katta raqamli ma’lumotlar (Big Data) texnologiyasining paydo bo‘lishi jamiyat hayotining barcha jabhalariga, shu jumladan huquqiy munosabatlarga ham bevosita ta’sir ko‘rsatmoqda. Big Datani to‘plash, saqlash, tahlil qilish va ulardan foydalanish jarayonida shaxsiy hayot daxlsizligi, ma’lumotlarni himoya qilish, ma’lumotlar egasining roziligi, intellektual mulk va algoritmik qarorlar uchun javobgarlik kabi dolzarb huquqiy muammolar yuzaga chiqmoqda. Shu bilan birga, Big Data asosida shakllanadigan algoritmik boshqaruv va avtomatik qaror qabul qilish tizimlari inson huquqlari, erkinliklari va qonuniy manfaatlariga qanday ta’sir qilayotganini baholash va nazorat qilish masalasi xalqaro hamjamiyat diqqat markazida turibdi. Shu bois, bugungi kunda Big Data texnologiyalarining imkoniyatlari faqat texnik jihatdan emas, balki huquqiy nuqtai nazardan ham chuqur o‘rganishni talab etmoqda.

Jahonda Big Data texnologiyalari jamiyat hayotining barcha jabhalariga, jumladan iqtisodiyot, tibbiyot, ta’lim, boshqaruv va huquqiy munosabatlar tizimida keng qo‘llanila boshladi. Chunonchi, *Jahon Banki va OECD* ma’lumotlariga muvofiq hamda *IDC kompaniyasi* tomonidan e’lon qilingan *(The Data Age 2025)*[1] hisobotida ko‘ra 2025-yilda dunyo bo‘ylab yaratilgan, yig‘ilgan va iste’mol qilingan ma’lumotlar hajmi *181 zettabaytga* yetishi kutilmoqda. Bu 2024-yilga nisbatan *23.13% o‘sishni* anglatadi[2]. Shuningdek, global Big Data analitikasi bozor qiymati *2025-yilda $ 396.4 milliardni* tashkil etsa, 2029-yilga kelib bu raqamlar *$ 655.53 milliardga* yetishi taxmin qilinmoqda[3].

O‘zbekistonda so‘nggi yillarda raqamlashtirish jarayonlari davlat siyosatining ustuvor yo‘nalishlaridan biriga aylangan bo‘lib, elektron hukumat, raqamli iqtisodiyot, masofaviy xizmatlar va boshqa shu kabi innovatsion yo‘nalishlarning jadal rivojlanishi natijasida yuridik munosabatlarda katta hajmdagi axborotlar to‘planishi, saqlanishi va qayta ishlanishi ehtiyoji ortmoqda. Aynan shu jarayonlar zamirida katta raqamli ma’lumotlarning huquqiy tartibga solinishi dolzarb masalaga aylanmoqda.

O‘zbekiston Respublikasi Prezidentining 2019-yil 5-apreldagi F-5464-sonli farmoyishi ilovasi bilan tasdiqlangan O‘zbekiston Respublikasining fuqarolik qonunchiligini takomillashtirish konsepsiyasida fuqarolik-huquqiy munosabatlarda axborot-kommunikatsiya texnologiyalarni qo‘llashning huquqiy asoslarini shakllantirish, xususan, kripto-aktivlar, shu jumladan mayning aylanmasini rivojlantirish, shaxsi ko‘rsatilmagan ma’lumotlarning sezilarli massivlarini (“Big Data”) yig‘ish va qayta ishlashni huquqiy tartibga solish, elektron tijoratdan

[1] Reinsel D., Ghantz J., Rhydning J. The Digitization of the World. From Edge to Core // The Data Age 2025 https://www.seagate.com/files/www-content/our-story/trends/files/idc-seagatedataage-whitepaper
[2] https://www.demandsage.com/big-data-statistics/
[3] https://www.wipo.int/edocs/mdocs/scp/en/scp_31/scp_31_c_ai_wipo.pdf

foydalanish, elektron maydonchalar orqali xaridlarni amalga oshirish bo‘yicha imkoniyatlarni kengaytirish[1] vazifalari aniq qilib belgilab berilgan.

O‘zbekiston Respublikasi Prezidentining 2024-yil 14-oktabrdagi PQ-358-son qarori bilan tasdiqlangan “Sun’iy intellekt texnologiyalarini 2030-yilga qadar rivojlantirish strategiyasi” sun’iy intellekt texnologiyalari rivojlanishining joriy holati va xorijiy mamlakatlarning ilg‘or tajribalarini hisobga olgan holda mamlakatimizda sun’iy intellektni keng qo‘llash, jadal rivojlantirish maqsadlari, vazifalari va ustuvor yo‘nalishlarini belgilaydi[2]. Strategiyada ilk marta Big Dataning huquqiy ta’rifi aniqlangan bo‘lsa-da, uni tartibga solishuvchi huquqiy mexanizmlar ochiqligicha qolmoqda.

Big Data texnologiyasi bugungi kunda nafaqat iqtisodiy yoki texnologik jarayonlarda, balki huquqiy munosabatlarni shakllantirishda, ularni tahlil qilish va tartibga solishda ham muhim o‘rin egallamoqda. Masalan, Big Data asosida ishlovchi algoritmlar shartnomalar tuzish, tahlil qilish, iste’molchilarning xatti-harakatlarini bashorat qilish, kredit reytinglarini baholash, hatto sud qarorlarini modellashtirish kabi huquqiy yo‘nalishlarda keng qo‘llanilmoqda. Shu bilan birga, ushbu texnologiyalar inson huquqlari, shaxsiy hayot daxlsizligi, diskriminatsiyaga qarshi kurash kabi dolzarb huquqiy masalalar bilan ham bevosita to‘qnash keladi.

O‘zbekiston Respublikasida raqamli rivojlanish siyosati doirasida qator huquqiy hujjatlar, jumladan, “Elektron hukumat to‘g‘risida”gi qonun, “Axborot erkinligi to‘g‘risida”gi qonun, “Shaxsga doir ma’lumotlar to‘g‘risida”gi qonun va boshqa normativ-huquqiy hujjatlar qabul qilingan. Biroq Big Data kategoriyasi ushbu huquqiy manbalarda bevosita va aniq belgilab qo‘yilmagan. Bu esa mazkur sohada huquqiy bo‘shliqlar, tushunmovchiliklar va qo‘llanilishdagi ziddiyatlarni keltirib chiqarmoqda.

Shu bilan birga, Big Dataning o‘ziga xos xususiyatlari hisoblangan *hajm, xilma-xillik, qiymat, tezlik va ishonchlilik (5V modeli)* fuqarolik-huquqiy normalar bilan to‘liq uyg‘unlashmaydi. Masalan, axborotlar asosida avtomatik qarorlar qabul qilinishi, algoritmik diskriminatsiya holatlari yoki intellektual mulk huquqlari doirasidagi masalalar fuqarolik-huquqiy munosabatlarda yangi yondashuvlarni talab qilmoqda.

O‘zbekiston Respublikasining Fuqarolik kodeksi, O‘zbekiston Respublikasining “Elektron hisoblash mashinalari uchun yaratilgan dasturlar va ma’lumotlar bazalarining huquqiy himoyasi to‘g‘risida”gi (2003-yil), “Mualliflik huquqi va turdosh huquqlar to‘g‘risida”gi (2006-yil), “Axborotlashtirish to‘g‘risida”gi (2003-yil), “Axborot erkinligi prinsiplari va kafolatlari to‘g‘risida”gi (2022-yil), “Shaxsga doir ma’lumotlar to‘g‘risida”gi (2019-yil), “Davlat sirlarini saqlash to‘g‘risida”gi (1993-yil), “Elektron tijorat to‘g‘risida”gi (2022-yil), “Elektron hujjat aylanishi to‘g‘risida”gi (2004-yil), “Elektron hukumat to‘g‘risida”gi (2015-yil) qonunlari, O‘zbekiston Respublikasi Prezidentining 2024-yil 14-oktabrdagi PQ-358-son qarori bilan tasdiqlangan “Sun’iy intellekt texnologiyalarini 2030-yilga qadar rivojlantirish strategiyasi”, O‘zbekiston

[1] Qonun hujjatlari ma’lumotlari milliy bazasi, 06.04.2019-y., 08/19/5464/2891-son
[2] Qonunchilik ma’lumotlari milliy bazasi, 17.10.2024-y., 07/24/358/0825-son

Respublikasi Axborot kodeksi loyihasi va mavzuga oid boshqa normativ-huquqiy hujjatlarida belgilangan ustuvor vazifalarni amalga oshirishda ushbu dissertatsiya tadqiqoti muayyan darajada xizmat qiladi.

**Tadqiqotning respublika fan va texnologiyalar rivojlanishining asosiy ustuvor yo‘nalishlariga mosligi.** Dissertatsiya tadqiqoti respublikada fan va texnologiyalarni rivojlantirishni nazarda tutuvchi “2022–2026-yillarga mo‘ljallangan Yangi O‘zbekistonning taraqqiyot strategiyasi”ning II bo‘limida belgilangan mamlakatimizda adolat va qonun ustuvorligi tamoyillarini taraqqiyotning eng asosiy va zarur shartiga aylantirishga doir ustuvor yo‘nalishi asosida bajarilgan.

**Muammoning o‘rganilganlik darajasi.** Mamlakatimizda Big Dataning fuqarolik-huquqiy tartibga solish, uning fuqarolik huquqi institutlari bilan aloqasi yo‘nalishida fragmentar ravishda ilmiy ishlanmalar uchraydi. Ushbu mavzuga aloqador bo‘lgan axborot, ma’lumotlar bazasi, tijorat siri (know-how), shaxsiy nomulkiy huquqlar hamda intellektual mulkka oid mavzularda O.Oqyulov, V.Ergashev, B.Toshev, N.Imomov, S.Gulyamov, I.Rustambekov, O.Xazratqulov, Q.Mehmonov, S.Bozarov va A.Yakubov[1] va boshqalar tomonidan ilmiy tadqiqot ishlari olib borilgan. Shu bilan birga, milliy huquqshunos olimlar A.Ismanjonov tomonidan axborotning fuqarolik-huquqiy maqomi, A.Ubaydullayeva tomonidan sun’iy intellekt tomonidan yaratiladigan intellektual mulkni tartibga solish, I.Yakubova tomonidan shaxsiy nomulkiy munosabatlar, shuningdek N.Raimova tomonidan konfidensial axborotdan foydalanish masalalari ustida ilmiy ish olib borilgan.

Taqdiqotchi S.Mamanazarov tomonidan Big Dataning fuqarolik huquqiy maqomi mavzusida ish olib borilgan bo‘lishiga qaramasdan, unda asosan Big Dataning shaxsiy nomulkiy huquqlar bilan nisbati tadqiq qilingan. Qolaversa, ilmiy ishlanmada tadqiqotchi Big Dataning fuqarolik huquqiy rejimiga to‘xtalar ekan uning mulk huquqi va intellektual mulk huquqi bilan aloqasi, shuningdek ma’lumotlarni himoya qilish va maxfiylik siyosatiga alohida e’tibor qaratgan. Garchi tadqiqotchi tomonidan Big Dataning fuqarolik huquqiy rejimi ifodalashga harakat qilingan bo‘lsa-da, lekin mavzu kompleks sifatida, ya’ni shartnomaviy konstruksiya, intellektual mulk huquqi instituti qoidalari, zararni qoplash, himoya qilish usullari hamda raqobat qonunchiligi qoidalari kabi jihatlari tadqiq qilinmagan.

MDH mamlakatlarida A.Sergeyev, V.Lopatin, M.Rojkova, V.Vaypan, L.Sannikova, S.Poratasov, N.Polyanskaya, A.Savelyov, B.Totskiy va L.Chernyak[2]lar tomonidan Big Dataning huquqiy maqomi yuzasidan ilmiy izlanishlar olib borilgan.

Xorijiy mamlakatlarda Big Dataning intellektual mulk huquqi va uning institutlar bilan nisbati Daniel Gervais, J.Cohen, J.Ginsburg, W.Fisher, Reto M. Hilty, Jörg Hoffmann, Stefan Scheuerer, Jenny Quang, Luke Ali Budiardjo tomonidan o‘rganilgan bo‘lsa, Big Dataning mulkiy huquqlar bilan aloqadorligi masalasi esa M.Lemley, R.Merges, Peter DiCola, James Manyika, Michael Chui,

[1] Mazkur olimlar ishlarining to‘liq ro‘yxati dissertatsiyaning foydalanilgan adabiyotlar ro‘yxatida ko‘rsatilgan
[2] Mazkur olimlar ishlarining to‘liq ro‘yxati dissertatsiyaning foydalanilgan adabiyotlar ro‘yxatida ko‘rsatilgan

Brad Brown, Jacques Bughin, Richard Dobbs, Charles Roxburgh'larning asarlarida qayd etilgan. Shuningdek, Yevropa Ittifoqi tajribasida Big Dataning huquqiy holati va kelajagi bo'yicha Madeleine de Cock Buning, Isabella Lorenzoni, M.Stucke, A.Grunes[1]lar tomonidan ilmiy tadqiqot ishlarida tahlil qilingan.

Mazkur olimlar tomonidan Big Data munosabatlari bilan bog'liq u yoki bu masalalar, chunonchi Big Data jarayonlariga chambarchas bog'liq sanalmish intellektual mulk huquqi, shartnoma huquqi, delikt majburiyatlari hamda raqobat qonunchiligi kabi masalalar ma'lum darajada tadqiq etilgan bo'lsa-da, bugungi kunda Big Datani fuqarolik-huquqiy tartibga solish, ya'ni shartnomaviy-huquqiy tartibga solish, intellektual mulk huquqi qoidalarini qo'llash, shuningdek, yetkazilgan zararni qoplash kabi asosiy va dolzarb masalalar mamlakatimizda hali alohida tadqiqot obyekti sifatida kompleks ravishda o'rganilmagan.

**Dissertatsiya tadqiqotining dissertatsiya bajarilayotgan oliy ta'lim muassasasining ilmiy tadqiqot ishlari rejalari bilan bog'liqligi. Tadqiqot ishi Toshkent davlat yuridik universiteti ilmiy tadqiqot ishlari rejasining "Sanoat mulki obyektlarining fuqarolik-huquqiy maqomi: nazariya va amaliyot" mavzusidagi amaliy loyihasi (2021 – 2023-yillar) doirasida bajarilgan.**

**Tadqiqotning maqsadi** Big Data va unga oid munosabatlarni fuqarolik-huquqiy tartibga solish, ushbu sohadagi qonun hujjatlari va huquqni qo'llash amaliyoti samaradorligini oshirishga qaratilgan taklif hamda tavsiyalar ishlab chiqishdan iborat.

**Tadqiqotning vazifalari quyidagilardan iborat:**

Big Data tushunchasiga oid ilmiy-nazariy qarashlar va uning huquqiy tabiatini aniqlash;

Big Data maqomi va jarayonini huquqiy tartibga solish mexanizmini shakllantirish bo'yicha tavsiya berish;

Big Dataning fuqarolik huquqi institutlaridagi huquqiy nisbatlarini aniqlash, bunda intellektual mulk huquqi institutining mualliflik huquqi, ma'lumotlar bazasi, patent huquqi hamda tijorat siri rejimi qoidalarini Big Data jarayonlarida qo'llash sharoitlarini tahlil qilish;

Big Datani shartnomaviy-huquqiy tartibga solishning hamda ushbu sohadagi shartnoma konstruksiyalarini qo'llash amaliyotini yaxshilash yuzasidan tavsiyalar berish;

intellektual mulk huquqi instituti qoidalarini qo'llash orqali Big Datani tartibga solish ta'sirini aniqlash;

Big Data orqali yetkazilgan zararni qoplash masalalarini tahlil qilish;

Big Datani fuqarolik-huquqiy himoya qilish usullarini qayd etish hamda yangi usullarini joriy qilish;

Big Data munosabatlarini xorijiy davlatlar qonunchiligi bilan qiyoslash orqali uni fuqarolik-huquqiy tartibga solishni takomillashtirish bo'yicha takliflar ishlab chiqish;

O'zbekiston Respublikasida Big Dataga oid munosabatlarni huquqiy tartibga solishga oid taklif va tavsiyalar ishlab chiqishdan iborat.

[1] Mazkur olimlar ishlarining to'liq ro'yxati dissertatsiyaning foydalanilgan adabiyotlar ro'yxatida ko'rsatilgan

**Tadqiqotning obyekti** sifatida Big Datani fuqarolik-huquqiy tartibga solish bilan bog‘liq huquqiy munosabatlar tizimi olingan.

**Tadqiqotning predmetini** Big Datani fuqarolik-huquqiy tartibga soluvchi qonunchilik normalari hamda ilmiy-nazariy jihatlar va ushbu sohadagi huquqni qo‘llash amaliyoti bilan bog‘liq muammolar tashkil etadi.

**Tadqiqotning usullari.** Tadqiqotda tarixiy va tizimli usul, analiz va sintez usuli, qiyosiy-huquqiy va tahlil qilish usuli, normativ-huquqiy va amaliy tahlil usuli, umumlashtirish, mantiqiylik, huquqni qo‘llash va sud amaliyotini tahlil qilish kabi usullar qo‘llanilgan.

**Tadqiqotning ilmiy yangiligi** quyidagilardan iborat:

axborot resursi deganda axborot tizimi tarkibidagi elektron shakldagi axborot, ma’lumotlar banki, ma’lumotlar bazasi, shu jumladan axborot tizimlarida ochiq shaklda joylashtiriladigan yoxud e’lon qilinadigan audio-, video-, grafik va matnli axborot tushunilishi asoslantirilgan;

avtomatlashtirish vositalaridan foydalanmagan holda ishlov beriladigan hamda mehnat to‘g‘risidagi qonunchilik hujjatlariga muvofiq ishlov beriladigan shaxsga doir ma’lumotlar shaxsga doir ma’lumotlar bazalari ro‘yxatdan o‘tkazilmasligi asoslab berilgan;

biometrik va genetik ma’lumotlarni elektron shaklda saqlashda ushbu ma’lumotlar shifrlangan va kriptografik yoki boshqa usullarda himoyalangan bo‘lishi zarurligi asoslantirilgan;

mulkdor va (yoki) operator biometrik va genetik ma’lumotlar qayd etilgan moddiy jismlarning o‘g‘irlanishi, o‘chirilishi, yo‘q qilinishi, ruxsatsiz olinishi, o‘zgartirilishi hamda nazoratsiz qoldirilishining oldini oluvchi tegishli xavfsizlik choralarini ko‘rishi lozimligi asoslab berilgan.

**Tadqiqotning amaliy natijalari** quyidagilar iborat:

mamlakatimizda axborotga oid siyosatni takomillashtirish hamda Big Data munosabatlarini huquqiy tartibga solishda Big Data tushunchasi, maqomi va uning o‘ziga xos xususiyatlari ishlab chiqilgan hamda ular ishlab chiqilishi zarur bo‘lgan Axborot kodeksida aks etishi lozimligi asoslantirilgan;

Big Data natijasini raqamli aktiv sifatida talqin qilish mumkinligi, shuningdek intellektual mulk obyektlari ro‘yxatiga yangi noan’anaviy bo‘lgan obyekt sifatida Big Datani qo‘shish orqali intellektual mulk obyektlari ro‘yxati kengaytirish lozimligi asoslab berilgan;

Big Data munosabatlarini mualliflik huquqi, ma’lumotlar bazasi, patent huquqi hamda tijorat siri instituti qoidalari bilan tartibga solish murakkabligi hisobiga mazkur munosabatlarga nisbatan maxsus sui generis huquqiy rejimi joriy etish eng maqbul yechim ekanligi asoslab berilgan;

xorijiy davlatlar qonunchiligi tajribasi hamda adolatli foydalanish (fair use) tamoyili mazmunidan kelib chiqqan holda milliy mualliflik qonunchiligiga Matn va ma’lumot qazib olish (Text and data mining, TDM) bo‘yicha xavfsiz hudud (safe harbor)ga oid qoidalar kiritish zarurligi asoslab berilgan;

Big Data va shaxsga oid ma’lumotlarda shartnoma oldi muzokaralar instituti, ayniqsa akseptlash bilan bog‘liq jarayon murakkab shaklda ifodalanishi lozimligi asoslab berilgan;

Big Data munosabatlariga oid Axborotlarini tarqatmaslik to‘g‘risidagi shartnoma (Non-disclosure agreement, NDA), Ma’lumotlarni ishlash shartnomasi (Data Processing Agreement – DPA) kabi shartnomalarining yangi turlarini huquqni qo‘llash amaliyotida keng foydalanish borasida takliflar ilgari surilgan.

**Tadqiqot natijalarining ishonchliligi.** Tadqiqot natijalarining ishonchliligi ishda qo‘llanilgan usullar, uning doirasida foydalanilgan nazariy yondashuvlar rasmiy manbalardan olingani, xalqaro tajriba va milliy qonun hujjatlarining o‘zaro tahlil qilingani, xulosa, taklif va tavsiyalarning amaliyotda joriy etilgani, olingan natijalarning vakolatli tuzilmalar tomonidan tasdiqlangani bilan izohlanadi.

**Tadqiqot natijalarining ilmiy va amaliy ahamiyati.** Tadqiqot natijalarining ilmiy ahamiyati undagi ilmiy xulosa va amaliy takliflardan Big Datani fuqarolik-huquqiy tartibga solish yuzasidan ilmiy tadqiqotlar olib borishda, shuningdek “Fuqarolik huquqi”, “Axborot huquqi”, “Kiber huquq” hamda “Shaxsiy ma’lumotlar muhofazasi” kabi fanlarini o‘qitish va metodik tavsiyalar tayyorlashda foydalanish mumkin.

Tadqiqot natijalarining amaliy ahamiyati Big Datani huquqiy tartibga soluvchi normativ-huquqiy hujjatlarni, huquqni qo‘llash amaliyotini takomillashtirishda, shuningdek sun’iy intellekt va Big Data texnologiyasi amaliyotida foydalanish mumkinligi bilan belgilanadi.

**Tadqiqot natijalarining joriy qilinishi.** Big Datani fuqarolik-huquqiy tartibga solish bo‘yicha olib borilgan tadqiqot natijalari asosida:

axborot resursi tushunchasiga oid taklif “O‘zbekiston Respublikasining ayrim qonun hujjatlariga o‘zgartish va qo‘shimchalar kiritish to‘g‘risida”gi 2021-yil 21-apreldagi O‘RQ–683-sonli Qonuni 3-moddasining 1-bandida o‘z aksini topgan (O‘zbekiston Respublikasi Oliy Majlisi Senatining Sud-huquq masalalari va korrupsiyaga qarshi kurashish qo‘mitasining 2023-yil 30-avgustdagi 64-son dalolatnomasi). Ushbu taklifning joriy qilinishi axborot tizimi tarkibi va shaklining huquqiy asosini yaratishga xizmat qilgan;

avtomatlashtirish vositalaridan foydalanmagan holda ishlov beriladigan hamda mehnat to‘g‘risidagi qonunchilik hujjatlariga muvofiq ishlov beriladigan shaxsga doir ma’lumotlar shaxsga doir ma’lumotlar bazalari ro‘yxatdan o‘tkazilmasligi haqidagi taklif Vazirlar Mahkamasining 2020-yil 8-fevraldagi 71-son qarori bilan tasdiqlangan “Shaxsga doir ma’lumotlar bazalarining davlat reyestri to‘g‘risida”gi nizomning 5-bandi ikkinchi qismi yettinchi va sakkizinchi xatboshilarida qayd etilgan (O‘zbekiston Respublikasi Bosh vaziri kotibiyatining Axborot-tahlil va yuridik ta’minlash departamentining 2025-yil 30-iyundagi 35-son dalolatnomasi). Mazkur taklifning joriy qilinishi shaxsga doir ma’lumotlar bazasi sifatida talqin qilinmaydigan holatlarni aniqlashga xizmat qilgan.

biometrik va genetik ma’lumotlarni elektron shaklda saqlashda qo‘llaniladigan himoya usullariga oid taklifi O‘zbekiston Respublikasi Vazirlar Mahkamasining 2022-yil 5-oktabrdagi 570-son qarori bilan tasdiqlangan “Biometrik va genetik ma’lumotlar mavjud bo‘lgan moddiy jismlarga hamda bunday ma’lumotlarni shaxsga doir ma’lumotlar bazalaridan tashqarida saqlash texnologiyalariga oid talablar to‘g‘risida”gi nizomning 4-bandida qo‘llanilgan (O‘zbekiston Respublikasi Bosh vaziri kotibiyatining Axborot-tahlil va yuridik

ta’minlash departamentining 2025-yil 30-iyundagi 35-son dalolatnomasi). Ushbu taklifning joriy qilinishi shaxsga oid ma’lumotlarni himoya qilish usullarini, shuningdek, ushbu yo‘nalishda qo‘llaniladigan xavfsizlik choralarini ishlab chiqishga xizmat qilgan.

mulkdor va (yoki) operator biometrik va genetik ma’lumotlar qayd etilgan moddiy jismlarni saqlashga oid tegishli xavfsizlik choralarini ko‘rishi lozimligi haqidagi taklifi O‘zbekiston Respublikasi Vazirlar Mahkamasining 2022-yil 5-oktabrdagi 570-son qarori bilan tasdiqlangan “Biometrik va genetik ma’lumotlar mavjud bo‘lgan moddiy jismlarga hamda bunday ma’lumotlarni shaxsga doir ma’lumotlar bazalaridan tashqarida saqlash texnologiyalariga oid talablar to‘g‘risida”gi nizomning 6-bandida qo‘llanilgan (O‘zbekiston Respublikasi Bosh vaziri kotibiyatining Axborot-tahlil va yuridik ta’minlash departamentining 2025-yil 30-iyundagi 35-son dalolatnomasi). Ushbu taklifning joriy qilinishi biometrik va genetik ma’lumotlar qayd etilgan moddiy jismlarning o‘g‘irlanishi, o‘chirilishi, yo‘q qilinishi, ruxsatsiz olinishi, o‘zgartirilishi hamda nazoratsiz qoldirilishining oldini oluvchi tegishli xavfsizlik choralarini ishlab chiqishga xizmat qilgan.

**Tadqiqot natijalarining aprobatsiyasi.** Tadqiqot natijalari 4 ta, jumladan, 2 ta xalqaro, 2 ta respublika ilmiy-amaliy anjumanlarida muhokamadan o‘tkazilgan.

**Tadqiqot natijalarining e’lon qilinganligi.** Tadqiqot mavzusi bo‘yicha jami 7 ta ilmiy ish, shu jumladan OAKning dissertatsiya asosiy ilmiy natijalarini chop etishga tavsiya etilgan nashrlarda 5 ta maqola (3 tasi xorijiy nashrlarda) chop etilgan.

**Dissertatsiyaning tuzilishi va hajmi.** Dissertatsiya kirish, to‘qqizta paragrafdan iborat uch bob, xulosa, foydalanilgan adabiyotlar ro‘yxati va ilovalardan iborat. Dissertatsiyaning hajmi 156 betni tashkil etadi.

## DISSERTATSIYANING ASOSIY MAZMUNI

Dissertatsiyaning kirish qismida tadqiqot mavzusining dolzarbligi va zarurati, tadqiqotning respublika fan va texnologiyalari rivojlanishining asosiy ustuvor yo‘nalishlariga muvofiqligi, tadqiq etilayotgan muammoning o‘rganilganlik darajasi, dissertatsiya mavzusining dissertatsiya bajarilayotgan oliy ta’lim muassasasining ilmiy-tadqiqot ishlari bilan bog‘liqligi, tadqiqotning maqsad va vazifalari, obyekti va predmeti, usullari, tadqiqotning ilmiy yangiligi va amaliy natijasi, tadqiqot natijalarining ishonchliligi, tadqiqot natijalarining ilmiy va amaliy ahamiyati, ularning joriy qilinganligi, tadqiqot natijalarining aprobatsiyasi, natijalarning e’lon qilinganligi, dissertatsiyaning hajmi va tuzilishi haqida ma’lumotlar yoritib berilgan.

Dissertatsiyaning **“Katta raqamli ma’lumotlarning (Big Data) umumiy tavsifi”** deb nomlangan birinchi bobida (Big Data) tushunchasi va uning belgilari, unga oid qonunchilikning rivojlanish tendensiyalari, Big Dataning fuqarolik huquqi institutlaridagi huquqiy nisbati, shuningdek Big Dataning axborot va ma’lumotlar bazasi (database)dan farqli jihatlari, katta raqamli ma’lumotlarni fuqarolik huquqi obyekti sifatidagi turli yondashuvlari tahlil qilingan.

Tadqiqotchi Big Data tushunchasini tahlil qilishda ko‘plab iqtisodchi va boshqa soha olimlar (Klifford Linch, J.Manyika, B.Jacques, M.Loukides) va chet el huquqshunos (Daniel Gervais, J.Cohen, J.Ginsburg, W.Fisher, Reto M. Hilty, Jörg Hoffmann, Stefan Scheuerer, Jenny Quang, Luke Ali Budiardjo, Madeleine de Cock Buning, Isabella Lorenzoni, M.Stucke, A.Grunes, M.Rojkova, V.Vaypan, L.Sannikova, N.Polyanskaya) hamda milliy huquqshunos (S.Gulyamov, I.Rustambekov, Q.Mehmonov, S.Bozarov, S.Safoyeva, A.Ubaydullayeva hamda S.Mamanazarov) olimlarning fikr va qarashlaridan foydalanib, ular bilan munozaraga kirishgan.

Shu bilan birga, tadqiqotchi tomonidan Big Data tushunchasining **mazmuniy va etimologik tavsifini** aniqlash maqsadida Gartner, Nessi kabi AKT sohasidagi nufuzli hamjamiyatlar va McKinsey Global instituti hisobotlari, shuningdek Techopedia lug‘atiga murojaat qilingan.

Dissertatsiya ishida Big Data va uning o‘ziga **xos belgilari** (xususiyat)lari sifatida *“Big Data 5V modeli”* tahlil qilingan. Chunonchi, bunda bir guruh olimlar (D.Laney,Daniel Gervais, J.Cohen, J.Ginsburg, W.Fisher) katta raqamli ma’lumotlar uchun *hajm (volume), xilma-xillik (variety), qiymat (value), tezlik (velocity) va ishonchlilik (veracity)* belgilari birlamchi ekanligi qayd etilsa, boshqa bir olimlar (Stella Hrehova, Jenny Quang, Luke Ali Budiardjo, Madeleine de Cock Buning) *joy (venue) va haqiqatlilik (validity)* kabi xususiyatlar ham Big Datada asosiy ekanligini isbotlashga harakat qilishgan.

Dissertant tomonidan Big Data jarayonlari **qay tartibda ishlashi** ilmiy ishda batafsil yoritib berilgan. Chunonchi, Big Data quyidagi tartibda amalga oshiriladi:

1. Big Data uchun *ma’lumotlar korpusi* shakllantiriladi;
2. *“Matn va ma’lumotlarni qazib olish” (Text and Data Mining (TDM))* tizimi orqali muayyan manbalardan ma’lumotlar yig‘iladi;
3. To‘plangan ma’lumotlar *ML (machine learning)* hamda *Deep learning* tizimi orqali tahlil qilinadi va ishlov beriladi;
4. Big Data natijasi *bulutli texnologiya, mahalliy serverlar, Data lake* va *warehouse* hamda ayrim hollarda *blockchain texnologiyalarida* saqlanadi va boshqariladi;
5. SI vositalari yordamida amalga oshiriladigan *ma’lumotlar to‘plami* sifatida yakuniy natija holatda qayd etiladi.

Tadqiqot ishida Big Data uchun **manba** sifatida quyidagi 3 ta ko‘rinish e’tirof etilgan:

*Birinchi - hukumat ma’lumotlari (Open data),* bunda asosan davlat organlari va idoralari tomonidan to‘planadigan shaxsiy va shaxsiy bo‘lmagan axborotlar.

*Ikkinchi – elektron platforma (e-platforma) yoki boshqa shakldagi axborot texnologiyalariga oid xizmatlar*da foydalanuvchi, iste’molchi va tijorat maqsadida ta’minlanadigan axborotlar.

*Uchinchi – foydalanuvchi tomonidan generatsiyalashgan axborotlar* (user generated data) bo‘lib, odatda kuki fayllar (cookies), internet xizmatlari provayderi ma’lumotlari (Internet Service Provider (ISP) data) hamda GPS ma’lumotlari (transport vositasining aniq geografik joylashuvi, sayohatlar yo‘nalishi)ni o‘z ichiga

oladi. Mazkur ma’lumotlar *tizimlashgan (SQL (Structured Query Language))* yoki *tizimlashmagan (NoSQL ((Non-Structured Query Language)) tizimlar, Hadoop, Spark, Cassandra, MongoDB, Hive* kabi texnologiyalar asosida ishlanishi mumkinligi qayd etilgan. Aynan shu jihati bilan Big Data ma’lumotlar bazasi bilan nisbati aks etishi dissertant tomonidan alohida urg‘u berilgan.

Tadqiqot ishida Big Data *a) texnologiya; b) ma’lumotlar to‘plami; c) ma’lumotlar va texnologiyalar uyg‘unlashgan kompleks institut* hamda *d) huquqiy fenomen* sifatida ilmiy izlanish olib borilgan. Bunda Big Datada sun’iy intellekt vositalari yordamida amalga oshiriladigan *ma’lumotlar to‘plami sifati*da huquqiy asoslantirilgan xulosaga kelingan. Shundan kelib chiqib, *Big Data* tushunchasiga quyidagi mualliflik ta’riflari keltirib o‘tilgan:

*“Big Data – sun’iy intellekt vosita (algoritm)lari yordamida ma’lumotlar to‘plash, saqlash, boshqarish, tahlil qilish va qayta ishlash jarayonlarini muvofiqlashtiradigan, shuningdek katta hajmdagi yuqori tezlikda avtomatlashtirilgan ma’lum qiymatdagi turli-xil manbalardan tashkil topadigan ma’lumotlar to‘plami”.*

Bunda Big Datada asosiy jihat sifatida ma’lumotlar to‘plami ma’lum sun’iy intellekt vositalari yordamida qayta ishlash imkoniyatlarining mavjudligi bilan belgilanadi, degan xulosaga kelindi.

Bugungi kunga kelib Big Dataga oid bo‘lgan jarayonlarni huquqiy tavsiflash, uning maqomini belgilash, mazkur jarayonni huquqiy tartibga solish kabi vazifalar huquq hamjamiyatining oldida turgan dolzarb masalalar sirasiga mansubdir. Dissertant firkircha, Big Dataga oid to‘g‘ridan-to‘g‘ri, mazmuniy qarashlar hozirgacha normativ-huquqiy hujjatlar fragmentar tarzda o‘z aksini topgan, xolos. Bu kabi holatlarda Big Data fenomeni va jarayonlariga huquqiy tavsif berish uchun sohaga oid doktrinalar yoki huquq prinsiplariga murojaat qilish maqsadga muvofiqligi ta’kidlanadi. Dissertatsiya ishida Big Dataga oid munosabatlarni huquqiy tartibga solishga oid dunyo bo‘yicha tan olingan *a) Ma’lumotlar xavfsizligi doktrinasi (Data Security Policies); b) shaxsiy ma’lumotlarni himoya qilish doktrinasi (General Data Protection); c) ma’lumotlar boshqaruvi doktrinasi (Data Governance); d) xalqaro ma’lumotlar oqimi doktrinasi (International Data Flow)* kabi huquqiy doktrinalar mazmuni qayd etilgan. Xususan, disseratsiya ishida milliy qonunchilikka *shaxsiy ma’lumotlarni himoya qilish doktrinasi (General Data Protection)* asosida ma’lumotlarni to‘plashga rozilik olish masalasi, qayta ishlashning shaffofligi, ma’lumotlar portabelligi huquqi; “unutilish huquqi”ni ta’minlash hamda avtomatlashtirilgan qarorlar qabul qilish kabi yangi chaqiruvlarga sabab bo‘layotganligi hamda uni bartaraf qilish uchun asoslantirilgan takliflar ishlab chiqilgan.

Tadqiqotchi qarashlarida hamda *Complexity Theory (Murakkablik nazariyasi)* ga ko‘ra, Big Data murakkab jarayon va turli xil institutlardan iborat bo‘lganligi uchun Big Data jarayonlarini yagona qonunchilik bilan tartibga solish imkonsiz sanaladi. Big Dataga oid jarayonlarda axborot yoki ma’lumotlar birlamchi bo‘lishi, tabiiy. Ushbu nuqtai nazardan, Big Data maqomi va unga oid jarayonlarini huquqiy tartibga solish asoslari va uning rivojlanish tendensiyalarini shartli ravishda ikki guruh orqali tizimlashtirish mumkin. Ushbu guruhlarning dastlabkisi — *qonun*

*hujjatlari* bo‘lsa, ikkinchisi — *qonunosti hujjatlaridir*. Big Data mazmunan olib qaraganda ma’lumot va unga ishlov bera oladigan texnologiyalar hosil qilishi, tabiiydir. Bugungi kunga kelib, mamlakatimizda Big Dataga oid jarayonlar *qonun analogiyasi* asosida “Axborotlashtirish to‘g‘risida”gi (2003-yil), O‘zbekiston Respublikasining “Axborot erkinligi prinsiplari va kafolatlari to‘g‘risida”gi (2022-yil), O‘zbekiston Respublikasining “Shaxsga doir ma’lumotlar to‘g‘risida”gi (2019-yil), O‘zbekiston Respublikasining “Davlat sirlarini saqlash to‘g‘risida”gi (1993-yil), O‘zbekiston Respublikasining “Elektron tijorat to‘g‘risida”gi (2022-yil), O‘zbekiston Respublikasining “Elektron hujjat aylanishi to‘g‘risida”gi (2004-yil), O‘zbekiston Respublikasining “Elektron hukumat to‘g‘risida”gi (2015-yil) kabi axborot sohasidagi qonunlar orqali tartibga solinib kelinayotganligi dissertatsiya ishida alohida ta’kidlangan.

Dissertatsiyada qonunosti hujjatlar ham sezilarli darajada tahlil qilingan, bunda eng ahamiyatli sanalgan qonunchilik hujjatlari o‘rganib chiqilgan. Chunonchi, O‘zbekiston Respublikasi Prezidentining 2024-yil 14-oktabrdagi PQ-358-son qarori bilan tasdiqlangan “Sun’iy intellekt texnologiyalarini 2030-yilga qadar rivojlantirish strategiyasi” Big Dataga oid huquqiy ta’rif taqdim etishi bilan birga, qaysi sohalarda qo‘llanilishi hamda qaysi usulda tartibga solinishi mumkinligi haqidagi savollarga javob taqdim qila olgan. Strategiyaga muvofiq *“katta ma’lumotlar”* — hajmi, xilma-xilligi, tezligi va (yoki) o‘zgaruvchanligi bilan ajralib turadigan, samarali saqlash, boshqarish va tahlil qilish uchun talab etiladigan keng *ma’lumotlar to‘plami* sifatida qayd etilgan.

Muallif dissertatsiyada Big Dataning fuqarolik huquqidagi obyekt sifatidagi turli yondashuvlarni *(a) nomoddiy obyekt, b) intellektual mulkning yangi noa’nanaviy obyekti (data as intellectual property), c) raqamli aktiv (data as digital asset) hamda d) tijorat siri (data as trade secret))* tahlil qilgan va ularni O‘zbekiston qonunchiligi bilan solishtirgan.

Tadqiqotchi tomonidan Big Data milliy fuqarolik qonunchiligida to‘g‘ridan-to‘g‘ri mustaqil nomoddiy obyekt sifatida Fuqarolik kodeksining 81-moddasida nazarda tutilmagan bo‘lsa-da, o‘z mohiyatiga ko‘ra, raqamli shaklda mavjud bo‘lib, jismoniy substansiyaga ega bo‘lmagan axborotlar yig‘indisi bo‘lganligi sababli u **nomoddiy obyekt sifatida** talqin qilinishi mumkinligi hamda mazkur nuqtai nazar Big Datani huquqiy obyekt sifatida e’tirof etishga imkon berishini ta’kidlanadi. Bunda asosiy vazifa nomoddiy obyekt sifatidagi Big Dataning axborotdan farqli jihatlari qayd etilib, asosiy farqlovchi belgisi uning *qiymati* hisoblanib, bu quyidagi o‘ziga xos xususiyatlarda ifoda etiladi:

1. fuqarolik huquqlari subyektining ma’lum ehtiyojlarini qondirish va qiziqishini uyg‘otish qobiliyati, xususan, noyob tovarlar yoki xizmatlar yaratish yoki Big Data tahlili asosida samaraliroq korporativ harakatlarni amalga oshirish orqali;

2. ma’lum va cheklangan shaxslar doirasi uchun axborotning potensial (Big Data xomashyo ma’lumotlari) yoki real (Big Data qayta ishlash natijasi) qiymatga ega bo‘lishi, bu ma’lum huquqiy munosabatda muayyan axborotning qiymati tor yo‘naltirilgan xarakterga egaligidan dalolat beradi;

3. ekvivalent almashish xususiyati;

4. Big Datani yig‘ish va qayta ishlash imkoniyati zarur quvvatlarga ega bo‘lgan muayyan subyektlar doirasi bilan cheklangan, bu esa shu kabi ma’lumotlarga o‘ziga xos cheklangan ravishda foydalanish imkoniyatini yaratadi.

Dissertatsiyada Big Dataga nisbatan *mulk huquqi doktrinasidagi* yangi yondashuv *(Raqamli aktiv)* asosida alohida ilmiy tadqiq qilingan. Tadqiqotchi tomonidan Big Data o‘zida iqtisodiy qiymatni mujassamlashtirgan raqamli resurs sifatida **raqamli aktiv** sifatida baholanishi mumkinligiga urg‘u berilgan. Mazkur qarashlar bugungi kunga kelib xorijiy olimlar (Julie Cohen, Catherine Jasserand, Viktor Mayer-Schönberger, V.Lopatin, M.Rozkova) tomonidan keng qo‘llanilmoqda. Dissertant ham xorijiy olimlarning qarashlarini qo‘llab quvvatlagan holda Big Datani raqamli aktiv sifatida talqin qiladi hamda mazkur yo‘nalishdagi quyidagi belgilari tahlil qiladi:

*a) raqamli shakl;*
*b) moddiy-ashyoviy shaklning yo‘qligi;*
*c) real yoki potensial qiymatning mavjudligi;*
*d) ma’lumotlar aylanish imkoniyati;*
*e) maxsus texnik qurilmalar (SI)* yordamida amalga oshiriladi.

Ilmiy ishda Big Data, ayniqsa, biznes faoliyatida mijozlar haqidagi ma’lumotlar, algoritmik tahlillar, statistik ma’lumotlar va boshqa operatsion axborotlarni o‘z ichiga olgan holatlarda, **tijorat siri sifatida** huquqiy himoyaga ega bo‘lishi mumkinligi, bunda muhim shart sifatida Big Data ustidan egasi tomonidan maxfiylik rejimi o‘rnatilgan bo‘lishi, ya’ni unga kirish cheklangan va sir saqlash chorasi ko‘rilgan bo‘lishi kerakligi qayd etilgan. Ma’lumki, muayyan doiradagi axborotlarga nisbatan tijorat siri rejimini qo‘llash mumkin, vaholanki har qanday Big Data natijasiga nisbatan mazkur rejim qoidalarini qo‘llab bo‘lmaydi. Dissertant fikricha quyidagi asoslarga muvofiq Big Dataga nisbatan tijorat siri rejimini to‘liq ravishda qo‘llab bo‘lmaydi:

1. *oshkor qilinmagan bo‘lishi* (Big Data ko‘pincha jamoat manbalari (ijtimoiy tarmoqlar, davlat statistikasi, ochiq APIlar)dan yig‘iladi hamda Ochiq manbadan olingan ma’lumot sir bo‘lishi mumkin emas);
2. *maxfiylikni saqlash bo‘yicha choralar ko‘rilgan bo‘lishi (*Big Datada subyekt ko‘pincha maxfiylikni rasmiy rasmiylashtirmagan yoki himoya choralari ko‘rmagan bo‘ladi).

Muallif Big Datani nomoddiy obyekt sifatida qayd etib, unga nisbatan *raqamli aktiv* sifatidagi yondashuvini qo‘llab quvvatlagan holda Big Datani intellektual mulkning boshqa (noan’anaviy) obyektlar guruhidan joy olishi lozimligini ta’kidlaydi.

Dissertatsiyaning ikkinchi bobi **“Big Datani fuqarolik huquqiy tartibga solish mexanizmlari”** deb nomlanib, ushbu bobda Big Datani shartnomaviy-huquqiy tartibga solish, intellektual mulk huquqi instituti qoidalarini qo‘llash hamda Big Data orqali yetkazilgan zararni qoplash masalalari tahlil qilingan.

Tadqiqotchi tomonidan Big Dataga oid *Ma’lumot almashish shartnomalari (Data sharing agreements), Ma’lumotlarni litsenziyalash shartnomalari, Ma’lumotlardan foydalanish va xizmat ko‘rsatish shartnomalari (Service Level Agreement, SLA), Ma’lumotlarni transfer qilish (o‘tkazish) shartnomalari,*

*Axborotlarini tarqatmaslik to‘g‘risidagi shartnoma (Non-disclosure agreement, NDA) va Ma’lumotlarni ishlash shartnomasi (Data Processing Agreement - DPA)* kabi yangi turdagi majburiyatning alohida turlarining huquqiy belgilari sanab chiqilgan. Bunda shartnoma mazmuni, ya’ni taraflarning huquq va majburiyatlari Yevropa Ittifoqining Raqamli kontent va xizmatlar to‘g‘risidagi Direktivasi, Data Act, AQSHdagi Uniform Commercial Code, Germaniyaning Fuqarolik kodeksidagi qoidalar asosida qiyosiy-huquqiy talqin qilindi. Dissertatsiyada Big Data shartnomasi shartlari buzilganda, umumiy shartnoma huquqida ko‘zda tutilgan javobgarlik mexanizmlari ishga tushishi, bunda zararni qoplash, shartnomani bir tomonlama bekor qilish, majburiy ijro hamda uchinchi shaxslar oldidagi javobgarlik kabi choralar qo‘llanilishi mumkinligi belgilangan.

Big Data jarayonlariga intellektual mulk huquqi instituti qoidalari qo‘llash masalasi yuzasidan uni *a) mualliflik huquqi obyekti sifatida himoya qilish; b) ma’lumotlar bazalarini huquqiy himoya qilish; c) patent huquqi; d) tijorat siri rejimi* kabi yo‘nalishlarda tahlil qilindi.

Ilmiy ishda Big Dataga nisbatan ***mualliflik huquqi rejimini*** qo‘llash noto‘g‘ri yechim sifatida talqin qilindi. An’anaviy intellektual mulk huquqi asosan ijodiy faoliyat natijalari (asarlar, ixtirolar, dizaynlar va h.k.) hamda individualizatsiya vositalarini (firma nomi, tovar belgisi kabi) himoya qiladi. Big Data esa ko‘pincha ijodiy asar emas, balki faktlar majmui, kuzatuv natijalari, sensor ma’lumotlari va shunga o‘xshash tizimlashmagan, xom ma’lumotlarni o‘z ichiga oladi. **Feist v. Rural** ishi yuzasidan oddiy faktlar mualliflik huquqi bilan himoyalanmaydi. Shu bois, katta raqamli ma’lumotlar to‘plamining o‘zi (agar u mualliflik huquqi nuqtai nazaridan original tuzilishga ega bo‘lmasa) bevosita mualliflik huquqi obyekti bo‘la olmaydi. Oqibatda tadqiqotchi tomonidan Big Data mualliflik huquqining asosiy ustunlari sanalmish *“ijodiylik”* va *“o‘ziga xoslik” (originality)* talablariga javob bera olmaydi, degan xulosaga kelingan.

Dissertatsiyada Big Dataga nisbatan ***ma’lumotlar bazasi huquqi rejimini*** qo‘llashga oid muhokamalar aks etgan. Bunda Big Data tarkibidagi ma’lumotlar bazasi yoki to‘plam tanlanishi yoki tartibga solinishi bo‘yicha ijodiy xususiyatga ega bo‘lsa, u holda u ma’lumotlar bazasi huquqi bilan himoyalanadigan kompilyatsiya (to‘plam asari) bo‘lishi mumkin. Tadqiqotchi tomonidan ma’lumotlar bazasi sifatida “obyektiv shaklda ifodalangan, EHM yordamida topish va ishlov berish mumkin bo‘lgan tarzda tizimlashtirilgan ma’lumotlar majmui” sifatida himoya qilinishi,lekin Big Data ko‘pincha ijodiy tanlovsiz, avtomatik tarzda tizimlashtirilmagan (noSQL) ma’lumotlar asosida ham to‘planishi mumkinligi, shu sababli ham ma’lumotlar bazasi yoki mualliflik huquqi bunday Big Dataning tarkibiga nisbatan himoya huquqini bermaydi, chunki unda mualliflik uchun zarur bo‘lgan original ijodiylik xususiyati mavjud emasligi bilan ifodalanadi. Muallif tomonidan shu asosida **Big Dataning oddiy ma’lumotlar bazasi (database)dan** quyidagi farqli tomonlari e’tirof etilgan:

*Ma’lumot hajmi:* odatda o‘lchami chegaralangan va tizimlashgan (ya’ni, oldindan belgilangan jadval va ustunlar ko‘rinishida bo‘ladi). Masalan, mijozlar ro‘yxati, mahsulotlar katalogi, bankdagi tranzaksiyalar sanalsa, Big Datada juda katta, murakkab va doimiy o‘sib boruvchi ma’lumotlar to‘plami bo‘lib, an’anaviy

MB tizimlari orqali boshqarish qiyin. Bu ma’lumotlar turli manbalardan (ijtimoiy tarmoqlar, IoT qurilmalar, video yozuvlar, sensorlar va boshqalar) keladi.

*Ma’lumotlar strukturasi:* databaseda asosan strukturali ma’lumotlar bilan ishlaydi – ya’ni, aniq shaklga ega bo‘lgan, jadval ko‘rinishidagi ma’lumotlar tashkil qilsa, BDda strukturali, yarim strukturali (masalan, *XML, JSON fayllar*) va strukturalanmagan (masalan, matnlar, videolar, rasmlar) ma’lumotlarni ham qamrab oladi.

*Texnologiyalar:* an’anaviy ma’lumotlar bazalari uchun SQL (Structured Query Language) asosiy vosita hisoblanadi. Big Data uchun esa *NoSQL tizimlar, Hadoop, Spark, Cassandra, MongoDB, Hive* kabi texnologiyalar qo‘llaniladi. Bu tizimlar katta raqamli ma’lumotlarni parallel tarzda qayta ishlashga mo‘ljallangan. Shu sababli Big Data sifatida qayd etish uchun u albatta ML yoki TDM jarayonlarini o‘z ichiga oladigan SI yordamida ishlaydigan bo‘lishi lozim.

Dissertatsiyada xizmat, tijorat sirlari hamda ishlab chiqarish sirlari kabi “maxfiy axborot”larga nisbatan *“mutlaq huquqlar rejimi”i* qo‘llaniladi. Big Data natijalari barcha uchun foydalanishga yo‘l qo‘yilishi mezoni hisobiga Big Dataga nisbatan *Nou-xau himoya (tijorat siri)* mexanizmini qo‘llash maqsadga muvofiq emas, degan xulosaga kelingan.

Tadqiqotchi ixtirochilik talabi, shuningdek, yangilik, sanoatga tatbiq etish, aqliy ijodiylik va yetarli oshkor etish kabi shartlarni bajarish juda qiyin yoki imkonsiz bo‘lganligi bois Big Dataga nisbatan *Patent huquqi rejimini* qo‘llash maqsadga muvofiq emas, degan qarashni ilgari surgan. Shu nuqtai nazardan Big Data munosabatlariga nisbatan hamda uni himoya qilish uchun ***maxsus sui generis ma’lumotlar bazasi huquqi rejimi*** joriy etish eng maqbul yechim bo‘lishi mumkin, chunki mavjud huquqiy vositalardan hech biri bunday natijalarni to‘liq himoya qila olmaydi.

Ishda an’anaviy delikt huquqidagi sababiyat (kauzalitet) tamoyilini qo‘llash Big Data sharoitida murakkablashib, bir nechta aybdorlar o‘rtasida javobgarlikni taqsimlash masalasi ochiq qolishi mumkinligi hamda Big Data natijasida yetkazilgan zarar moddiy jihatdan aniqlanmasligi yoki “mavhum” bo‘lishi bilan ifodalangan. Dissertatsiyada shaxsiy ma’lumotlar daxlsizligini himoya qilishda hamda Sun’iy intellekt va algoritmlarning javobgarligi yo‘nalishlarida yetkazilgan zarar va uni qoplash usullari haqida huquqiy qarashlar AQShdagi **Clearview AI** ishi hamda Buyuk Britaniyada **Lloyd v. Google** ishlari misolida yoritib berilgan.

Dissertatsiyaning uchinchi bobi **“Katta raqamli ma’lumotlarni (Big Data) himoya qilishning xorijiy tajribasi hamda takomillashtirish masalalari”** deb nomlanib, unda Big Datani fuqarolik-huquqiy himoya qilish usullari, xorijiy mamlakatlar qonunchiligida huquqiy tartibga solinish masalalari hamda Big Dataga oid munosabatlarni huquqiy tartibga solishning rivojlantirish istiqbollari tahlil qilingan.

Ilmiy ishda Big Data texnologiyalari bilan bog‘liq huquqiy munosabatlarni samarali tartibga solish uchun an’anaviy huquqiy usullarga qo‘shimcha ravishda, zamonaviy noyurisdiksiyaviy (huquqiy bo‘lmagan, lekin xavfsizlik va nazoratni ta’minlovchi) texnik va tashkiliy yondashuvlar tahlil qilingan.

Dissertatsiya ishida tadqiqotchi tomonidan Big Data munosabatlarida fuqarolik qonunchiligidagi umumiy va maxsus himoya choralari (chunonchi FKning 11-moddasida nazarda tutilgan)ni qayd qilgan holda shartnoma huquqi, Sui generis ma'lumotlar bazasi huquqi, shaxsiy nomulkiy huquqlar hamda raqobat qonunchiligi qoidalariga murojaat qilingan. Tadqiqotda alohida ta'kidlanishicha, faqatgina normativ-huquqiy asoslar bilan Big Data xavfsizligini ta'minlash yetarli emas. Shu bois Big Data munosabatlarida *opt-in va opt-out (rozilik berish va uni chaqirib olish), shifrlash (Encryption), pseudonimlashtirish va anonimlashtirish, ma'lumotlarga kirishni nazorat qilish (Access Control), hamda ma'lumotlar maskalash (Data Masking), Audit va Log tizimlari* kabi qo'shimcha noyurisdiksiyaviy usullardan ham keng foydalanish lozimligi ishda alohida qayd etilgan hamda bu mazmundagi yangiliklar shaxsga doir ma'lumotlar to'g'risidagi qonunchilikda aks etishi lozimligi asoslangan.

Dissertatsiya ishining amaliy ahamiyatini oshirish maqsadida *Google Spain SL v. Agencia Española de Protección de Datos (2014) – CJEU, Carpenter v. United States (AQSh, 2018), DABUS case, Google Shopping v EU* kabi mashhur sud va amaliyot ishlariga murojaat qilgan.

Big Datani xorijiy mamlakatlar qonunchiligida huquqiy tartibga solinish masalalari yuzasidan dissertatsiya ishida *AQSH modeli, YI modeli* hamda *Buyuk Britaniya modeli* tanlangan. AQSH modeli (opt-out) ma'lumotlarga ishlov berishda qat'iy nazorat va cheklovlar o'rnatmaydi, YI modeli esa uning teskarisi sanaladi. Unda Big Data 2018-yildan kuchga kirgan **Umumiy ma'lumotlarni himoya qilish reglamenti (General Data Protection Regulation (GDPR))** asosida shakllantirilgan, qolaversa, uni tartibga solishga mo'ljallangan Sui Generis rejimi ham mavjud. Shu nuqtai nazardan, Big Datani tartibga solishda YI modeli milliy qonunchilik uchun optimal yechim sifatida belgilangan.

Dissertatsiya ishida muallif tomonidan Big Dataga oid munosabatlarni huquqiy tartibga solishning rivojlantirish istiqbollari *a) Big Dataga oid munosabatlarni tartibga solishda tashkiliy mexanizmlarni takomillashtirish* hamda *b) Big Dataga oid qarashlar va xalqaro tendensiyalarni fuqarolik huquqi institutlariga uyg'unlashtirish* kabi yo'nalishlarda amalga oshirilishi lozimligi ta'kidlanadi.

Tadqiqotchi tomonidan *Big Dataga oid munosabatlarni tartibga solishda tashkiliy mexanizmlarni takomillashtirish* yo'nalishida mazkur sohadagi vakolatli organni belgilash va uning funksiyalarini aniqlash, shuningdek Big Data bilan ishlaydigan katta tashkilotlarda *Ma'lumotlar muhofazasi bo'yicha mutaxassis* (DPO) kabi maxsus vakolatli lavozim joriy qilish qayd etilgan. Big Dataga oid yangi chaqiruvlar fuqarolik qonunchiligiga integratsiya qilishda *uchinchi tomon nazariyasi (Third-Party Doctrine), shartnoma oldi jarayonlarini takomillashtirish, mualliflik huquqiga ayrim istisnolar* kiritishni taqazo etgan.

Chunonchi, ishda xorijiy davlatlar qonunchiligi tajribasi va "adolatli foydalanish" (fair use) tamoyili mazmunidan kelib chiqib, milliy mualliflik huquqi qonunchiligiga Matn va ma'lumotlarni qazib olish (Text and Data Mining – TDM) faoliyatiga nisbatan "*xavfsiz hudud" (safe harbor)* tamoyiliga oid qoidalarni kiritish

zarurligi ilmiy asoslangan. Bunday yondashuv Big Data sohasidagi huquqiy munosabatlarning barqaror va samarali rivojlanishiga xizmat qilishi mumkin.

Tadqiqotda muallif tomonidan Big Data munosabatlarining asosiy omillaridan biri bo‘lgan — *ma’lumotlarga ishlov berishga rozilik (consent)* berish jarayoni shartnoma huquqi doirasidagi aksept instituti bilan qiyosiy-huquqiy tahlil qilingan. Natijada, Big Data va shaxsga oid ma’lumotlar kontekstida shartnoma tuzish jarayoni, xususan, rozilik bildirish mexanizmi murakkab va ko‘p bosqichli shaklda ifodalanishi lozimligi haqida ilmiy asoslangan taklif ilgari surilgan.

## XULOSA

Katta raqamli ma’lumotlarni (Big Data) fuqarolik-huquqiy tartib solish mavzusidagi tadqiqot ishi natijasida quyidagi ilmiy-nazariy, qonunchilik normalarini takomillashtirishga oid hamda amaliy taklif va xulosalar ishlab chiqildi:

**I. Ilmiy-nazariy taklif va xulosalar:**

1. Katta raqamli ma’lumot (Big Data)ga quyidagi mualliflik ta’rifi ishlab chiqildi: *Big Data – sun’iy intellekt vosita (algoritm)lari yordamida ma’lumotlar to‘plash, saqlash, boshqarish, tahlil qilish va qayta ishlash jarayonlarini muvofiqlashtiradigan, shuningdek katta hajmdagi yuqori tezlikda avtomatlashtirilgan ma’lum qiymatdagi turli-xil manbalardan tashkil topadigan ma’lumotlar to‘plami.* Bunda Big Datada asosiy jihat sifatida ma’lumotlar to‘plami ma’lum sun’iy intellekt vositalari yordamida qayta ishlash imkoniyatlarining mavjudligi bilan belgilanadi.

2. Tadqiqot ishi davomida Big Data a) texnologiya sifatida; b) ma’lumotlar to‘plami sifatida; c) ma’lumotlar va texnologiyalar uyg‘unlashgan kompleks institut sifatida hamda d) huquqiy fenomen sifatida tadqiqot olib borildi. Bunda Big Datada sun’iy intellekt vositalari yordamida amalga oshiriladigan ma’lumotlar to‘plami sifatida huquqiy jihatdan asoslantirildi.

3. Dissertatsiya ishida Big Dataning axborotning boshqa turlaridan asosiy farqlovchi belgisi uning *qiymati* ekanligi asoslantirildi hamda uning o‘ziga xos xususiyatlarda ifoda etilishi belgilab berildi.

*birinchidan,* fuqarolik huquqlari subyektining ma’lum ehtiyojlarini qondirish va qiziqishini uyg‘otish qobiliyati, xususan, noyob tovarlar yoki xizmatlar yaratish yoki Big Data tahlili asosida samaraliroq korporativ harakatlarni amalga oshirish orqali;

*ikkinchidan,* ma’lum va cheklangan shaxslar doirasi uchun axborotning potentsial (Big Data xomashyo ma’lumotlari) yoki real (Big Data qayta ishlash natijasi) qiymatga ega bo‘lishi, bu ma’lum huquqiy munosabatda muayyan axborotning qiymati tor yo‘naltirilgan xarakterga egaligidan dalolat beradi;

*uchinchidan,* ekvivalent almashish xususiyati;

*to‘rtinchidan,* Big Datani yig‘ish va qayta ishlash imkoniyati zarur quvvatlarga ega bo‘lgan muayyan subyektlar doirasi bilan cheklangan, bu esa shu kabi ma’lumotlarga o‘ziga xos cheklangan ravishda foydalanish imkoniyatini yaratadi.

4. Ilmiy ishda Big Data ikki xil usulda ishlab chiqilishi: bunda dastlab, Big Data bazasi (korpus)ini yaratish hisoblanib, unda turli ochiq manbalardan *“Matn va ma’lumotlarni qazib olish” (Text and Data Mining (TDM))* tizimi orqali ma’lumotlarni yig‘iladi hamda mazkur ma’lumotlar*“Deep learning”* tizimi orqali qayta ishlanishining huquqiy jihatlari asoslab berildi.

5. Big Data a) *hukumat ma’lumotlari (Open data), b) elektron platforma (e-platforma) yoki boshqa shakldagi axborot texnologiyalariga oid xizmatlardagi ma’lumotlar hamda c) foydalanuvchi tomonidan generatsiyalashgan axborotlar* (user generated data) kabi uchta guruhdagi manbalarga asoslangan holda bazasi shakllantirilishi amaliy va nazariy jihatdan asoslab berildi.

6. Xorijiy mamlakatlar tajribasi hamda “Complexity Theory” (Murakkablik nazariyasi)ga ko‘ra Big Data murakkab jarayon va turli xil institutlardan iborat bo‘lganligi uchun Big Data jarayonlarini yagona qonunchilik bilan tartibga solish imkonsiz sanaladi. Shu bois, mamlakatimizda Big Dataga oid bo‘lgan qarashlar to‘liq shakllanmagan bir paytda Big Dataga oid jarayonlarni tartibga solish mexanizmini mazkur doktrina yordamida amalga oshirish maqsadga muvofiq, degan xulosaga kelindi.

7. Tadqiqot ishida mamlakatimizda Big Dataga oid jarayonlar *qonun analogiyasi* asosida axborot sohasidagi normativ hujjatlar orqali tartibga solib kelinayotganligi hamda ushbu sohada maxsus tizimlashtirilgan qonunga zarurat mavjudligi asoslab berildi.

8. Dissertatsiya ishida Big Dataning fuqarolik huquqidagi obyekt sifatidagi turli yondashuvlar *(a) nomoddiy obyekt, b) intellektual mulkning yangi noa’nanaviy obyekti (data as intellectual property), c) raqamli aktiv (data as digital asset) hamda d) tijorat siri (data as trade secret))* tahlil qilgan. Bunda Big Dataning huquqiy rejimini belgilashda uni intellektual mulkning noan’anaviy obyekti guruhiga mansub *raqamli aktiv (nomoddiy obyekt )* sifatida talqin qilish va shu orqali uning mazmunini fuqarolik huquqi obyektlari qatorida qayd etish va fuqarolik-huquqiy institutlar orqali tartibga solish lozimligi ko‘rsatib berildi.

9. Big Dataning raqamli aktiv sifatida e’tirof etilishida quyidagi huquqiy belgilari tahlil qilindi:

*f) raqamli shakl;*
*g) moddiy-ashyoviy shaklning yo‘qligi;*
*h) real yoki potensial qiymatning mavjudligi;*
*i) ma’lumotlar aylanish imkoniyati;*
*j) maxsus texnik qurilmalar (SI)* yordamida amalga oshirilishi.

Mazkur belgilar Big Data ham ega bo‘lib, ular ham raqamli, nomoddiy shaklda ifodalangan, texnik vositalar yordamida qayta tiklanadi va ekvivalent almashinuvni amalga oshirish imkonini beradigan iqtisodiy qiymatga ega ekanligi asoslab berildi.

10. Big Data jarayonlariga intellektual mulk huquqi instituti qoidalari qo‘llash masalasi yuzasidan uni *a) mualliflik huquqi obyekti sifatida himoya qilish; b) ma’lumotlar bazalarini huquqiy himoya qilish; c) patent huquqi; d) tijorat siri rejimi* kabi yo‘nalishlarda tahlil qilindi. Bunda *YI Sui Generis database rejimi* Big Data faqat ma’lumotlar bazasi qonunchiligi talablari bo‘yicha ma’lumotlar bazasi sifatida

tan olingan taqdirdagina qo‘llanilishi mumkin, degan xulosaga kelindi. Shuningdek, Big Data munosabatlariga nisbatan hamda uni himoya qilish uchun **Maxsus sui generis huquqiy rejim** joriy etish eng maqbul yechim bo‘lishi mumkin, chunki mavjud huquqiy vositalardan hech biri bunday natijalarni to‘liq himoya qila olmaydi.

11. Ishda *intellektual mulk obyektlari ro‘yxatiga yangi noan’anaviy bo‘lgan obyekt* sifatida Big Datani qo‘shish orqali intellektual mulk obyektlari ro‘yxati kengaytirish lozimligi asoslantirildi.

12. Xorijiy davlatlar qonunchiligi tajribasi hamda *adolatli foydalanish (fair use)* tamoyili mazmunidan kelib chiqqan holda milliy mualliflik qonunchiligiga *Matn va ma’lumot qazib olish ( Text and data mining, TDM) bo‘yicha xavfsiz hudud (safe harbor)*ga oid qoidalar kiritish zarurligi taklif qilindi. Bunda tijoriy maqsadlarni ko‘zlamagan holda *a) ilmiy tadqiqot maqsadlarida foydalanish* va *b) asardan texnik yoki muloqotsiz (non-communicative) foydalanish* uchun mualliflik qonunchiligida TDM tizimlari orqali ma’lumot to‘plash mumkinligi asoslantirib berildi.

13. Xorijiy davlatlar qonunchiligi tajribasidan kelib chiqqan holda SIga asoslangan TDM tizimlari orqali yaratilgan, dastlab yuqori ehtiyoj talab qiladigan, ammo tez qadrsizlanadigan qiymatga ega ma’lumotlarga nisbatan *g‘ayriqonuniy o‘zlashtirishga qarshi delikt va parazit xatti-harakatlardan himoyalanish* kabi himoya choralaridan foydalanish mumkin, degan xulosaga kelindi.

14. Butunjahon huquq olamida shaxsiy ma’lumotlarga ishlov berishda rozilik masalasida ikkita asosiy model mavjud: *opt-in (YI modeli) va opt-out (AQSH modeli).* Mazkur modellarni tahlil qilgan holda milliy qonunchilik opt-in modeli, ya’ni tashkilotlar shaxsiy ma’lumotlarni to‘plash yoki qayta ishlashdan oldin *aniq va ijobiy* rozilik olishlari shartligi asosida shakllantirilganligi asoslab berildi.

15. Big Data jarayonida shaxsga doir ma’lumotlarga ishlov berishda, xususan shaxsga oid biometrik va genetik ma’lumotlarni to‘plash, saqlash va boshqarishda huquqiy usullardan tashqari boshqa noyurisdiksiyaviy usullarni qo‘llash lozimligi haqida xulosaga kelindi. Shu bois Big Data munosabatlarida *opt-in va opt-out (rozilik berish va uni chaqirib olish), shifrlash (Encryption), pseudonimlashtirish va anonimlashtirish, ma’lumotlarga kirishni nazorat qilish (Access Control), hamda ma’lumotlar maskalash (Data Masking), Audit va Log tizimlari* kabi qo‘shimcha noyurisdiksiyaviy usullardan ham keng foydalanish lozimligi asoslab berildi.

**II. Tadqiqot natijalari bo‘yicha qonunchilik normalarini takomillashtirishga qaratilgan quyidagi taklif va xulosalar ishlab chiqildi:**

16. O‘zbekiston Respublikasining Konstitutsiyasining 31-moddasi ikkinchi qismi quyidagi tahrirda bayon etish taklif etildi:

*Har kim yozishmalari, telefon orqali so‘zlashuvlari, pochta, elektron va boshqa xabarlari, shuningdek,* ***shaxsga taalluqli bo‘lgan yoki uni identifikatsiya qilish imkonini beradigan axborot*** *sir saqlanishi huquqiga ega. Ushbu huquqning cheklanishiga faqat qonunga muvofiq va sudning qaroriga asosan yo‘l qo‘yiladi.*

17. O‘zbekiston Respublikasining Fuqarolik kodeksining 99-moddasi quyidagi tahrirda bayon etish taklif etildi:

*Shaxsning hayoti va sog‘lig‘i, sha’ni va qadr-qimmati, shaxsiy daxlsizligi,* ***shu jumladan identifikatsiya raqami, joylashuv ma’lumotlari, onlayn identifikator belgilovchi ma’lumotlarga bo‘lgan huquq****, ishchanlik obro‘yi, shaxsiy hayotining daxlsizligi, xususiy va oilaviy siri, nomga bo‘lgan huquqi, tasvirga bo‘lgan huquqi, mualliflik huquqi, boshqa shaxsiy nomulkiy huquqlar hamda tug‘ilganidan boshlab yoki qonunga muvofiq fuqaroga tegishli bo‘lgan boshqa nomoddiy ne’matlar tortib olinmaydi va o‘zga usul bilan boshqa shaxsga berilmaydi.*

18. O‘zbekiston Respublikasining Fuqarolik kodeksining 370-moddasi quyidagi tahrirdagi beshinchi xatboshi bilan to‘ldirish taklif etildi:

*Shaxsga doir ma’lumotlarga ishlov berish munosabatlarida aksept yozma yoki elektron hujjat shaklida bo‘lishi talab etiladi.*

19. O‘zbekiston Respublikasining “Elektron hisoblash mashinalari uchun yaratilgan dasturlar va ma’lumotlar bazalarining huquqiy himoyasi to‘g‘risida”gi Qonuning 1-moddasi o‘n to‘rtinchi xatboshi, “Axborotlashtirish to‘g‘risida”gi qonunining 3-moddasi to‘qqizinchi xatboshi, “Axborot erkinligi prinsiplari va kafolatlari to‘g‘risida”gi Qonunining 3-moddasi o‘n ikkinchi xatboshi, “Shaxsga doir ma’lumotlar to‘g‘risida”gi Qonuning 4-moddasi o‘ninchi xatboshi bilan to‘ldirish taklif etildi:

*Big Data – sun’iy intellekt vosita (algoritm)lari yordamida ma’lumotlar to‘plash, saqlash, boshqarish, tahlil qilish va qayta ishlash jarayonlarini muvofiqlashtiradigan, shuningdek katta hajmdagi yuqori tezlikda avtomatlashtirilgan ma’lum qiymatdagi turli-xil manbalardan tashkil topadigan ma’lumotlar to‘plami.*

20. O‘zbekiston Respublikasining “Mualliflik huquqi va turdosh huquqlar to‘g‘risida”gi Qonunining:

19-moddasi quyidagi mazmundagi sakkizinchi qismi bilan to‘ldirish taklif etildi:

*Sun’iy intellekt vositalari yordamida asarni takrorlashga ruxsat bergan muallif ushbu huquqni istalgan vaqtda chaqirib olishi (opt-out) mumkin.*

26-moddasi quyidagi mazmundagi sakkizinchi xatboshi bilan to‘ldirish taklif etildi:

*oshkor qilingan asarlardan yoki bunday asarlarning parchalaridan ilmiy tadqiqot maqsadlarida hamda tijoriy faoliyat bilan bog‘liq bo‘lmagan holda, shuningdek, muallifning mulkiy huquqlarini istalgan vaqtda chaqirib olish sharoitlari taqdim etilgandan so‘ng sun’iy intellekt vositalari orqali foydalanish yoki takrorlash.*

21. O‘zbekiston Respublikasining “Shaxsga doir ma’lumotlar to‘g‘risida”gi Qonunining:

4-moddasining ikkinchi xatboshi quyidagi tahrirda bayon etish taklif etildi:

*Shaxsga doir ma’lumotlar — muayyan jismoniy shaxsga taalluqli bo‘lgan yoki uni identifikatsiya qilish imkonini beradigan, elektron tarzda, qog‘ozda va (yoki) boshqa moddiy jismda qayd etilgan axborot.* ***Bunda shaxsga bevosita yoki bilvosita, ayniqsa ism, identifikatsiya raqami, joylashuv ma’lumotlari, onlayn identifikator kabi belgilovchi ma’lumotlar yoxud shaxsning jismoniy, fiziologik,***

***genetik, ruhiy, iqtisodiy, madaniy yoki ijtimoiy xususiyatlariga oid ma'lumotlar tushuniladi.***

4-moddasi quyidagi mazmundagi to‘qqizinchi xatboshi bilan to‘ldirish taklif etildi:

*Shaxsga doir ma'lumotlarga ishlov berishga rozilik – jismoniy shaxsning o‘z xohish-irodasini erkin, aniq, bildirishnoma va bir ma'noli tarzda ifodalashi. Bunda subyekt o‘ziga tegishli shaxsiy ma'lumotlarni ishlashga roziligini bayonot yoki aniq tasdiqlovchi harakat orqali bildirishi lozim.*

21-moddasi quyidagi mazmundagi sakkizinchi xatboshi bilan to‘ldirish taklif etildi:

*Shaxsga doir ma'lumotlar subyekti ma'lumotlarga ishlov berishga roziligini istalgan vaqtda chaqirib olish huquqiga ega. Rozilikni chaqirib olish, uni chaqirib olishdan avvalgi ma'lumotlarga ishlov berishning qonuniyligiga ta'sir qilmaydi. Rozilikni chaqirib olish, uni berish kabi aniq va oson bo‘lishi kerak.*

Quyidagi mazmundagi yangi $27^2$-moddasi bilan to‘ldirish taklif etildi:

**“Shaxsga doir ma'lumotlarni himoya qilish usullari**

*Shaxsga doir ma'lumotlarni himoya qilishning huquqiy usullari qonunchilik bilan belgilangan.*

*Ayrim holatlarda shaxs o‘ziga oid ma'lumotlarni himoya qilish uchun qonunda ko‘rsatilmagan boshqa noyurisdiksiyaviy usullardan foydalanishi mumkin.”*

**III. Amaliy taklif va tavsiyalar:**

22. Axborot xizmatlari (shaxsga oid ma'lumotlarni qayta ishlash) ko‘rsatishga ixtisoslashgan katta kompaniyalar axborot sohasidagi siyosatlarini mukammal boshqarish hamda iste'molchilar huquq va manfaatlarini himoya qilish maqsadida sohaga oid *Axborotlarini tarqatmaslik to‘g‘risidagi shartnoma (Non-disclosure agreement, NDA), Ma'lumotlarni ishlash shartnomasi (Data Processing Agreement – DPA)* kabi shartnomalarni amaliyotda qo‘llash lozimligi asoslantirildi.

23. GDPR qoidalari hamda xalqaro tajribadan kelib chiqqan holda axborot xizmatlari (shaxsga oid ma'lumotlarni qayta ishlash) ko‘rsatishga ixtisoslashgan katta kompaniyalarda axborot siyosatini boshqarish maqsadida *ma'lumotlar muhofazasi bo‘yicha mutaxassis (Data Protection Officer – DPO)* lavozimini joriy qilish maqsadga muvofiq hisoblanadi.

Bulardan tashqari dissertatsiya doirasida boshqa ilmiy-amaliy xulosa va takliflar ishlab chiqilgan bo‘lib, ularning barchasi O‘zbekistonda Big Data bilan ishlash tizimini to‘g‘ri yo‘lga qo‘yish, har taraflama huquqiy tartibga solish, ushbu munosabatlar taraflari huquq va manfaatlarini muvozanatli belgilashga xizmat qiladi.

**SCIENTIFIC COUNCIL No DSc.07/30.12.2019.Yu.22.01 FOR AWARDING SCIENTIFIC DEGREES AT TASHKENT STATE UNIVERSITY OF LAW**

**TASHKENT STATE UNIVERSITY OF LAW**

**TOJJIBOYEV SARVAR ZAFAROVICH**

# CIVIL-LEGAL REGULATION OF BIG DATA

12.00.03. – Civil law. Business Law.
Family Law. International Private Law

**ABSTRACT**
**of doctoral (Doctor of Philosophy) dissertation on legal sciences**

**Tashkent – 2025**

**The doctoral dissertation (PhD) theme was registered at the Supreme Attestation Commission under the Ministry of Higher Education, Science and Innovations of The Republic of Uzbekistan by B2024.3.PhD/Yu1534**

The doctoral dissertation is prepared at Tashkent State University of Law.

The abstract of the dissertation is posted in three languages (Uzbek, English, and Russian (resume)) on the website of the Scientific Council (www.tsul.uz) and the informational and educational portal "Ziyonet" (www.ziyonet.uz).

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The dissertation defense will be held on September 5, 2025, at 10:00 during the Scientific Council DSc.07/30.12.2019.Yu.22.01 at Tashkent State Law University. (Address: 100047, Sayilgokh street, 35 Tashkent city. Phone: (99871) 233-66-36; fax: (998971) 233-37-48; e-mail: info@tsul.uz).

The doctoral dissertation is available at the Information-Resource Center of Tashkent State University of Law (registered under №1414), (Address 100047, Tashkent city, A.Timur Street, 13. Phone: (99871) 233-66-36).

The abstract of the dissertation was submitted on August 21, 2025.

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# INTRODUCTION

## (annotation of the dissertation of Doctor of Philosophy (PhD))

**Relevance and necessity of the dissertation topic.** In the world, the last decade of the 21st century is considered as a stage distinguished by great achievements in the field of information technology. The emergence of digital transformation, artificial intelligence, automated systems, and especially big data technology has a direct impact on all spheres of society's life, including legal relations. In the process of collecting, storing, analyzing, and using Big Data, pressing legal issues arise, such as the inviolability of private life, data protection, consent of the data owner, intellectual property, and responsibility for algorithmic decisions. At the same time, the issue of assessing and monitoring how algorithmic management and automatic decision-making systems, formed on the basis of Big Data, affect human rights, freedoms, and legitimate interests, is at the center of attention of the international community. Therefore, today the capabilities of Big Data technologies require in-depth study not only from a technical, but also from a legal point of view.

In the world, Big Data technologies have begun to be widely used in all spheres of public life, including the economy, medicine, education, management, and legal relations. For example, according to the data from *the World Bank and the OECD* and the *(The Data Age 2025)*[1] report published *by the IDC company*, the volume of created, collected, and consumed data worldwide is expected to reach *181 zettabytes* by 2025[2]. This means *an increase of 23.13%* compared to 2024. Also, global Big Data analytics forecasts that the market value *will be $396.4 billion in 2025*, and by 2029 these figures *will reach $655.53 billion*[3].

In Uzbekistan, in recent years, digitalization processes have become one of the priorities of state policy, and as a result of the rapid development of e-government, the digital economy, remote services, and other similar innovative areas, the need for the collection, storage, and processing of large volumes of information in legal relations is increasing. Against the backdrop of these processes, the legal regulation of big data is becoming an urgent issue.

The Concept for Improving the Civil Legislation of the Republic of Uzbekistan, approved by the annex to the Decree of the President of the Republic of Uzbekistan dated April 5, 2019 No. R-5464, clearly defines the tasks of forming the legal basis for the application of information and communication technologies in civil law relations, in particular, the development of the circulation of crypto-assets, including mining, legal regulation of the collection and processing of significant arrays of unidentified data (Big Data), the use of e-commerce, expanding opportunities for making purchases through electronic platforms.

The "Strategy for the Development of Artificial Intelligence Technologies until 2030", approved by the Decree of the President of the Republic of Uzbekistan

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[1] Reinsel D., Ghantz J., Rhydning J. The Digitization of the World. From Edge to Core // The Data Age 2025 https://www.seagate.com/files/www-content/our-story/trends/files/idc-seagatedataage-whitepaper

[2] https://www.demandsage.com/big-data-statistics/

[3] https://www.wipo.int/edocs/mdocs/scp/en/scp_31/scp_31_c_ai_wipo.pdf

dated October 14, 2024 No. PP-358 , defines the goals, objectives, and priorities for the widespread use and accelerated development of artificial intelligence in our country, taking into account the current state of development of artificial intelligence technologies and the best practices of foreign countries. Although the legal definition of Big Data was defined for the first time in the Strategy, the legal mechanisms regulating it remain open.

Big Data technology today occupies an important place not only in economic or technological processes, but also in the formation of legal relations, their analysis and regulation. For example, algorithms based on Big Data are widely used in such legal areas as contract formation, analysis, forecasting consumer behavior, credit rating assessment, and even judicial decision modeling. At the same time, these technologies directly encounter such pressing legal issues as human rights, the inviolability of private life, and the fight against discrimination.

Within the framework of the digital development policy of the Republic of Uzbekistan, a number of legal documents have been adopted, including the Law On Electronic Government, the Law On Freedom of Information, the Law On Personal Data and other regulatory legal acts. However, the category of Big Data is not directly and clearly defined in these legal sources. This leads to legal gaps, misunderstandings, and contradictions in application in this area.

At the same time, the characteristics of Big Data, which are *volume, diversity, value, speed, and reliability (model 5V)* , are not fully compatible with civil law norms. For example, automatic decision-making based on information, cases of algorithmic discrimination, or issues within the framework of intellectual property rights require new approaches in civil law relations.

The Civil Code of the Republic of Uzbekistan, the Laws of the Republic of Uzbekistan On the Legal Protection of Programs for Electronic Computers and Databases (2003), On Copyright and Related Rights (2006), On Informatization (2003), On the Principles and Guarantees of Freedom of Information (2022), On Personal Data (2019), On the Protection of State Secrets (1993), On Electronic Commerce (2022), On Electronic Document Management (2004), On Electronic Government (2015), the Strategy for the Development of Artificial Intelligence Technologies until 2030 approved by the Decree of the President of the Republic of Uzbekistan dated October 14, 2024 No. PP-358 , the draft Information Code of the Republic of Uzbekistan and other regulatory legal acts related to the topic.

**The main direction of the research is the development of science and technology of the republic. Compliance with priority areas.** The dissertation research was carried out on the basis of the priority direction of transforming the principles of justice and the rule of law into the most fundamental and necessary condition for development in our country, defined in Section II of the Development Strategy of New Uzbekistan for 2022-2026, which provides for the development of science and technology in the republic.

**Level of study of the problem.** In our country, fragmentary scientific studies can be found addressing the civil law regulation of Big Data and its connection with civil law institutions. Scientific research on topics related to this topic, such as information, databases, trade secrets (know-how), personal non-

property rights, and intellectual property, was conducted by O.Okyulov, V.Ergashev, B.Toshev, N.Imomov, S.Gulyamov, I.Rustambekov, O.Khazratkulov, K.Mehmonov, S.Bozarov, A.Yakubov[1], and others. At the same time, national legal scholars A.Ismanjonov conducted research on the civil law status of information, A.Ubaydullayeva on the regulation of intellectual property created by artificial intelligence, I.Yakubova on personal non-property relations, and N.Raimova on the use of confidential information.

Despite the fact that the researcher S.Mamanazarov conducted work on the topic of the civil legal status of Big Data, he mainly studied the relationship of Big Data with personal non-property rights. Moreover, in the scientific work, the researcher focused on the civil law regime of Big Data, paying special attention to its relationship with property rights, intellectual property rights, as well as the policy of data protection and confidentiality. Although the researcher attempted to express the civil law regime of Big Data, the subject as a complex, that is, such aspects as the contractual structure, the rules of the intellectual property law institute, compensation for damages, methods of protection, and the rules of competition law, have not been studied.

In the CIS countries, scientific research on the legal status of Big Data was conducted by A.Sergeev, V.Lopatin, M.Rojkova, V.Vaypan, L.Sannikova, S.Poratasov, N.Polyanskaya, A.Savelyov, B.Totsky, and L.Chernyak[2].

In foreign countries, the intellectual property rights of Big Data and its relationship with institutions were studied by Daniel Gervais, J.Cohen, J.Ginsburg, W.Fisher, Reto M. Hilty, Jörg Hoffmann, Stefan Scheuerer, Jenny Quang, Luke Ali Budiardjo, and the issue of the connection of Big Data with property rights was noted in the works of M.Lemley, R.Merges, Peter DiCola, James Manyika, Michael Chui, Brad Brown, Jacques Bughin, Richard Dobbs, Charles Roxburgh. Also, the legal status and future of Big Data in the experience of the European Union were analyzed in the scientific research works of Madeleine de Cock Buning, Isabella Lorenzoni, M.Stucke, A.Grunes[3].

Although these scientists have studied to some extent certain issues related to Big Data relations, such as intellectual property rights, contract law, delicacy obligations, and competition law, which are closely related to Big Data processes, today the main and urgent problems of civil law regulation of Big Data have not yet been comprehensively studied as a separate object of research in our country.

**The object of the dissertation research is the higher educational institution where the dissertation was carried out connection with the research work plans of the institution.** The research work was carried out within the framework of the practical project of the research work plan of the Tashkent State University of Law on the topic Civil-Legal Status of Industrial Property Objects: Theory and Practice (2021 - 2023).

[1] A complete list of these scholars' works is provided in the bibliography of the dissertation.
[2] A complete list of these scholars' works is provided in the bibliography of the dissertation.
[3] A complete list of these scholars' works is provided in the bibliography of the dissertation.

**The purpose of the study is** to develop proposals and recommendations aimed at improving the civil law regulation of Big Data and related relations, the effectiveness of legislation and law enforcement practice in this area.

**The research objectives are as follows:**

Definition of scientific and theoretical views on the concept of Big Data and its legal nature;

Providing recommendations on the formation of a mechanism for the legal regulation of the status and process of Big Data;

Determining the legal relationships of Big Data in civil law institutions, analyzing the conditions for applying the rules of copyright, database, patent law, and the trade secret regime of the intellectual property law institution in Big Data processes;

Providing recommendations for improving the practice of contractual and legal regulation of Big Data and the application of contractual constructs in this area;

determination of the regulatory impact of Big Data by applying the constructs of the intellectual property law institute;

Analyzing issues related to compensation for damages caused through Big Data;

Registration of methods of civil law protection of Big Data and the introduction of new methods;

Development of proposals for improving the civil law regulation of Big Data relations by comparing them with the legislation of foreign countries;

Development of proposals and recommendations for the legal regulation of Big Data relations in the Republic of Uzbekistan.

**The object of the research** is the system of legal relations related to the civil law regulation of Big Data.

**The subject of the research is** legislative norms regulating Big Data, as well as scientific and theoretical aspects and problems related to law enforcement practice in this area.

**Research methods.** The study used such methods as the historical and systematic method, the method of analysis and synthesis, the comparative legal and analytical method, the method of normative legal and practical analysis, generalization, logic, analysis of law enforcement and judicial practice.

**The scientific novelty of the research** is as follows:

a proposal has been put forward that an information resource should be understood as information in electronic form, a database, including audio, video, graphic and textual information placed or published in an open form in information systems;

it is substantiated that personal data processed without the use of automation tools and personal data processed in accordance with labor legislation documents are not subject to registration in personal data databases;

the proposal is substantiated that when storing biometric and genetic data in electronic form, such data must be encrypted and protected using cryptographic or other methods;

it is noted that the owner and (or) operator must implement appropriate security measures to prevent theft, deletion, destruction, unauthorized acquisition, alteration, and uncontrolled access to physical objects containing recorded biometric and genetic data.

**Practical results of the study** include:

it is justified that the concept of Big Data, its status and features should be noted in the draft of the Information Code in improving information policy and legal regulation of Big Data relations in our country;

It was proposed that the result of Big Data can be interpreted as a digital asset, as well as the need to expand the list of intellectual property objects by adding Big Data as a new non-traditional object to the list of intellectual property objects;

Due to the complexity of regulating Big Data relations by the rules of copyright, databases, patent law, and the institution of trade secrets, the introduction of a special sui generis legal regime in relation to these relations is the most acceptable solution;

Based on the experience of the legislation of foreign countries and the content of the principle of fair use (fair use), the need to introduce provisions on a safe harbor for the extraction of text and data (Text and data mining, TDM) into national copyright legislation has been substantiated;

The proposal that the institution of pre-contractual negotiations in Big Data and personal data, especially the process related to acceptance, should be expressed in a complex form;

Proposals were put forward for the widespread use in legal practice of new types of agreements related to Big Data relationships, such as Non-disclosure agreements (NDA) and Data Processing Agreements (DPA).

**Reliability of the research results.** The reliability of the research results is evidenced by the methods used in the work, the theoretical approaches within its framework being derived from official sources, the comparative analysis of international experience and national legislation, the practical implementation of conclusions, proposals and recommendations, and the confirmation of obtained results by authorized bodies.

**Scientific and practical significance of the research results.** The scientific significance of the research results lies in the scientific conclusions and practical proposals it contains, which can be utilized in conducting scientific research on the civil law regulation of Big Data. Additionally, these findings can be used in teaching and preparing methodological recommendations for subjects such as Civil Law, Information Law, Cyber Law, and Personal Data Protection.

The practical significance of the research results is determined by their potential application in improving regulatory legal acts governing Big Data, enhancing law enforcement practices, as well as in the practical implementation of artificial intelligence and Big Data technologies.

**Implementation of the research results.** Based on the results of the study on the civil law regulation of Big Data:

The proposal regarding the concept of an information resource is reflected in paragraph 1 of Article 3 of the Law of the Republic of Uzbekistan Number LRU-

683 dated April 21, 2021 On Amendments and Additions to Certain Legislative Acts of the Republic of Uzbekistan (Act No. 64 of the Committee on Judicial and Legal Issues and Anti-Corruption of the Senate of the Oliy Majlis of the Republic of Uzbekistan dated August 30, 2023). The implementation of this proposal served to create a legal basis for the structure and form of the information system;

The proposal that personal data processed without the use of automation tools and processed in accordance with labor legislation should not be subject to registration in personal databases is noted in the seventh and eighth paragraphs of the second part of clause 5 of the Regulation On the State Register of Personal Databases, approved by Resolution No. 71 of the Cabinet of Ministers dated February 8, 2020 (Act No. 35 of the Department of Information and Analytical and Legal Support of the Secretariat of the Prime Minister of the Republic of Uzbekistan dated June 30, 2025). The implementation of this proposal has served to identify cases that cannot be considered as personal databases.

The proposal regarding protection methods used for storing biometric and genetic data in electronic form was incorporated into paragraph 4 of the Regulation On requirements for material objects containing biometric and genetic data and technologies for storing such data outside personal databases, approved by Resolution No. 570 of the Cabinet of Ministers of the Republic of Uzbekistan dated October 5, 2022 (as evidenced by Act No. 35 of the Department of Information Analysis and Legal Support of the Secretariat of the Prime Minister of the Republic of Uzbekistan dated June 30, 2025). The implementation of this proposal has contributed to the development of methods for protecting personal data, as well as security measures applied in this field.

The proposal that owners and (or) operators must implement appropriate security measures for storing physical objects containing biometric and genetic data was incorporated into paragraph 6 of the Regulation On requirements for physical objects containing biometric and genetic data and technologies for storing such data outside personal databases, approved by Resolution No. 570 of the Cabinet of Ministers of the Republic of Uzbekistan dated October 5, 2022 (as per Act No. 35 dated June 30, 2025, issued by the Information Analysis and Legal Support Department of the Secretariat of the Prime Minister of the Republic of Uzbekistan). The implementation of this proposal has led to the development of appropriate security measures to prevent the theft, erasure, destruction, unauthorized acquisition, alteration, and uncontrolled access to physical objects containing biometric and genetic data.

**Approbation of the research results.**The research results were discussed at 4 scientific and practical conferences, including 2 international and 2 republican ones.

**Publication of research results.**A total of 7 scientific papers have been published on the research topic, including 5 articles (2 in foreign publications) in journals recommended by the Higher Attestation Commission for publishing the main scientific results of the dissertation.

**Structure and volume of the dissertation.** The dissertation comprises an introduction, three chapters consisting of nine paragraphs, a conclusion, a list of references, and appendices. The total volume of the dissertation is 156 pages.

## MAIN CONTENT OF THE DISSERTATION

The introduction of the dissertation highlights the relevance and necessity of the research topic, its alignment with the main priority areas of scientific and technological development in the republic, the extent to which the problem under study has been researched, the connection between the dissertation topic and the research work of the higher education institution where the dissertation was conducted, the goals and objectives of the research, its object and subject, methods, scientific novelty and practical results, reliability of the research findings, scientific and practical significance of the research results, their implementation, approbation of the research results, publication of the findings, and information on the volume and structure of the dissertation.

The first chapter of the dissertation, entitled **General Characteristics of Big Data,** analyzes the concept of Big Data and its features, trends in the development of related legislation, the legal relationship of Big Data in civil law institutions, as well as the differences between Big Data and information and databases, and various approaches to big data as an object of civil law.

In analyzing the concept of Big Data, the researcher engaged with the opinions and views of numerous economists and scientists from other fields (Clifford Lynch, J. Manyika, B. Jacques, M. Loukides) as well as foreign legal scholars (Daniel Gervais, J. Cohen, J. Ginsburg, W. Fisher, Reto M. Hilty, Jörg Hoffmann, Stefan Scheuerer, Jenny Quang, Luke Ali Budiardjo, Madeleine de Cock Buning, Isabella Lorenzoni, M. Stucke, A. Grunes, M. Rojkova, V. Vaypan, L. Sannikova, N. Polyanskaya) and national legal scholars (S. Gulyamov, I. Rustambekov, Q. Mehmonov, S. Bozarov, S. Safoyeva, A. Ubaydullayeva and S. Mamanazarov).

Additionally, to determine **the conceptual and etymological description** of Big Data, the researcher consulted reports from authoritative ICT communities such as Gartner and NESSI, as well as the McKinsey Global Institute, and the Techopedia dictionary.

The dissertation analyzed Big Data and its **distinctive features** (characteristics) using *the Big Data 5V model*. While one group of scholars (D. Laney, Daniel Gervais, J. Cohen, J. Ginsburg, W. Fisher) noted that for large-scale digital data, the primary characteristics are *volume, variety, value, velocity, and veracity*, another group of scholars (Stella Hrehova, Jenny Quang, Luke Ali Budiardjo, Madeleine de Cock Buning) attempted to prove that *venue and validity* are also fundamental characteristics of Big Data. Thus, while a group of scientists (D.Laney, Daniel Gervais, J.Cohen, J.Ginsburg, W.Fisher) noted that for large-digit data, the characteristics *volume (volume), variety (variety), value (value), speed (velocity), and reliability (veracity)* are primary, other scientists (Stella Hrehova, Jenny Quang, Luke Ali Budiardjo, Madeleine de Cock Buning) tried to prove that

such characteristics as *place (venue) and validity (validity)* are also primary in Big Data.

The Big Data processes and **how they operate** are described in detail in the dissertation. Specifically, Big Data is implemented in the following order:

6. For Big Data, a *data corpus* is formed;
7. *Text and Data Mining (TDM) system* collects data from specific sources;
8. The collected data is analyzed and processed using *ML (machine learning)* and *Deep learning* systems;
9. Big Data results are stored and managed in *cloud technology, local servers, Data lake* and *warehouse,* and in some cases, *blockchain technologies;*
10. The final result is recorded as *a dataset* implemented using AI tools.

In the research work, the following 3 types are recognized **as sources** for Big Data:

*First - government data (Open data),* which mainly consists of personal and non-personal information collected by government bodies and agencies.

*Second* - information provided for user, consumer, and commercial purposes *through electronic platforms (e-platforms) or other forms of information technology services.*

*Third - user-generated information* (user-generated data), which typically includes cookies, Internet Service Provider (ISP) data, and GPS data (the vehicle's precise geographical location, travel routes). It is noted that these data can be processed based on *structured (SQL (Structured Query Language))* or *unstructured (NoSQL (Non-Structured Query Language)) systems, technologies such as Hadoop, Spark, Cassandra, MongoDB, Hive*. The dissertation author particularly emphasizes that this aspect reflects the relationship with Big Data databases.

In the research, Big Data was studied as *a) technology; b) dataset; c) a complex institution integrating data and technologies;* and *d) legal phenomenon.* In this context, a legally substantiated conclusion was reached *regarding Big Data as a dataset* processed using artificial intelligence tools. Based on this, *Big Data* is defined by the author as follows:

*"Big Data is a dataset that coordinates the processes of collecting, storing, managing, analyzing, and processing data using artificial intelligence tools (algorithms), as well as consisting of large volumes of high-speed automated data from various sources of certain value."*

It was concluded that the main aspect of Big Data is defined by the availability of processing capabilities for the dataset using certain artificial intelligence tools.

Today, tasks such as providing legal descriptions of Big Data processes, defining its status, and legally regulating this process are among the urgent issues facing the legal community. According to the dissertation author, direct and substantive views on Big Data have so far been reflected only fragmentarily in regulatory legal documents. In such cases, it is emphasized that referring to field-specific doctrines or legal principles is advisable to provide a legal description of the Big Data phenomenon and its processes. The dissertation notes the content of

internationally recognized legal doctrines related to the legal regulation of Big Data relationships, such as: *a) Data Security Policies; b) General Data Protection; c) Data Governance; d) International Data Flow.* In particular, the dissertation work highlights that the national legislation, based on *the General Data Protection doctrine*, is facing new challenges regarding issues of obtaining consent for data collection, ensuring transparency of processing, the right to data portability, implementing the "right to be forgotten," and automated decision-making. The work has developed substantiated proposals to address these challenges.

According to the researcher's views and *Complexity Theory*, since Big Data is a complex process and consists of various institutions, it is considered impossible to regulate Big Data processes through unified legislation. It is natural that information or data is primary in Big Data processes. From this perspective, the basis for legal regulation of Big Data status and related processes, as well as its development trends, can be conditionally systematized into two groups. The first of these groups is - *legislative acts*, and the second is - *sub-legislative acts.* Big Data, in essence, naturally generates information and technologies capable of processing it. To date, processes related to Big Data in our country have been regulated *based on legal analogy* through information-related laws such as On Informatization (2003), On the Principles and Guarantees of Freedom of Information (2022), On Personal Data (2019), On the Protection of State Secrets (1993), On Electronic Commerce (2022), On Electronic Document Management (2004), and On Electronic Government (2015), as specifically emphasized in the dissertation.

The dissertation also provides a significant analysis of subordinate legislation, examining the most important legislative acts. In particular, the "Strategy for the Development of Artificial Intelligence Technologies until 2030," approved by the Decree of the President of the Republic of Uzbekistan No. PP-358 dated October 14, 2024, not only provides a legal definition of Big Data but also answers questions about which areas it can be applied in and how it can be regulated. According to the Strategy, Big Data is defined as a largedataset characterized by volume, variety, velocity, and (or) variability, required for effective storage, management, and analysis.

In the dissertation, the author analyzed various approaches to Big Data as an object of civil law *((a) intangible object, b) new non-traditional object of intellectual property (data as intellectual property), c) digital asset (data as digital asset), and d) trade secret (data as trade secret))* and compared them with the legislation of Uzbekistan.

The researcher notes that although Big Data is not directly provided for in Article 81 of the Civil Code as an independent intangible object in national civil legislation, it can be interpreted **as an intangible object** since it exists in digital form and is a collection of information that does not have a physical substance. This perspective allows Big Data to be recognized as a legal object. In this case, the main task is to identify the differences between Big Data as an intangible object and information, with the main distinguishing feature being its *value*, which is expressed in the following specific characteristics:

1. The ability to satisfy certain needs and arouse interest of a civil rights subject, particularly by creating unique goods or services or by performing more effective corporate actions based on Big Data analysis;

2. The presence of potential (raw data of Big Data) or real (result of Big Data processing) value of information for a certain and limited circle of persons, indicating that the value of specific information in a particular legal relationship has a narrowly targeted nature;

3. The property of equivalent exchange;

4. The possibility of collecting and processing Big Data is limited to a certain range of subjects with the necessary capacities, which creates a specific limited access to such data.

In the dissertation, a separate scientific study was conducted on Big Data based on a new approach *(Digital Asset) in the doctrine of property rights.* The researcher emphasizes that Big Data can be valued as a digital asset, as it is a digital resource that embodies economic value. These views are widely adopted today by foreign scholars (Julie Cohen, Catherine Jasserand, Viktor Mayer-Schönberger, V. Lopatin, M. Rozkova). The dissertation author, supporting the views of foreign scholars, interprets Big Data as a digital asset and analyzes the following characteristics in this direction:

*k) digital form;*
*l) absence of physical form;*
*m) the presence of real or potential value;*
*n) transferability;*
*o) requires special technical devices* for implementation.

In the scientific work, it is noted that Big Data can be legally protected **as a trade secret,** especially in cases where business activities include customer information, algorithmic analyses, statistical data, and other operational information. An important condition for this is that the owner must have established a confidentiality regime over Big Data, i.e., access to it is restricted and measures to maintain secrecy have been taken. It is known that the trade secret regime can be applied to certain types of information, while the rules of this regime cannot be applied to all Big Data results.

According to the dissertation author, the commercial secret regime cannot be fully applied to Big Data for the following reasons:

3. *Being undisclosed* (Big Data is often collected from public sources such as social networks, government statistics, and open APIs, and information obtained from open sources cannot be considered confidential);

4. *Measures taken to maintain confidentiality* (In Big Data, the subject often has not formally established confidentiality or implemented protective measures).

The author, considering Big Data as an intangible object and supporting the approach to it as a *digital asset*, emphasizes that Big Data should be included in another (non-traditional) category of intellectual property objects.

The second chapter of the dissertation is titled **Mechanisms of civil law regulation of Big Data** and analyzes issues related to the contractual and legal

regulation of Big Data, the application of intellectual property law principles, and compensation for damages caused by Big Data.

The researcher has enumerated the legal characteristics of specific new types of obligations related to Big Data, such as Data Sharing Agreements, Data Licensing Agreements, Service Level Agreements (SLA), Data Transfer Agreements, Non-Disclosure Agreements (NDA), and Data Processing Agreements (DPA) . In this context, the content of the contract, namely the rights and obligations of the parties, was interpreted through a comparative legal analysis based on the provisions of the European Union Directive on Digital Content and Services, the Data Act, the Uniform Commercial Code in the USA, and the German Civil Code. The dissertation establishes that in case of violation of Big Data agreement terms, liability mechanisms provided for by general contract law are activated, which may include measures such as compensation for damages, unilateral termination of the agreement, enforcement, and liability to third parties.

Regarding the application of intellectual property law principles to Big Data processes, the issue was analyzed in the following areas: *a) protection as an object of copyright; b) legal protection of databases; c) patent law; d) trade secret regime.*

In the scientific work, the application of the copyright regime to Big Data was interpreted as an incorrect solution. Traditional intellectual property rights mainly protect the results of creative activity (works, inventions, designs, etc.) and means of individualization (such as company names, trademarks). Big Data, on the other hand, often is not a creative work, but a collection of facts, observation results, sensor data, and similar unstructured, raw information. Feist v. Rural case established that mere facts are not protected by copyright. Therefore, a large dataset itself (if it does not have an original structure from the perspective of copyright) cannot be a direct object of copyright. As a result, the researcher concluded that Big Data cannot meet the main pillars of copyright, namely the requirements of "creativity" and "originality", as defined in copyright law.

The dissertation reflects discussions on applying ***the database rights regime*** to Big Data. If the database or collection within Big Data possesses creative characteristics in terms of selection or organization, it can be considered a compilation (collective work) protected by database rights. The researcher argues for the protection of a database as "a set of systematized data expressed in an objective form, which can be retrieved and processed using a computer." However, Big Data is often collected without creative selection, based on automatically unsystematized (noSQL) data. Therefore, database or copyright laws do not provide protection rights for the content of such Big Data, as it lacks the original creative feature necessary for authorship.

Based on this, the author acknowledges the following differences **between Big Data and a database:**

*Data volume:* Usually limited in size and structured (i.e., in the form of pre-defined tables and columns). For example, customer lists, product catalogs, and bank transactions are considered traditional data, while Big Data consists of a huge, complex, and constantly growing collection of data that is difficult to manage

through traditional database systems. This data comes from various sources (social networks, IoT devices, video recordings, sensors, and others).

*Data structure:* A database mainly works with structured data - that is, data with a specific format in tabular form. Big Data, on the other hand, encompasses structured, semi-structured (for example, XML, JSON files), and unstructured (for example, texts, videos, images) data.

*Technologies:* SQL (Structured Query Language) is the primary tool for traditional databases. For Big Data, NoSQL systems, Hadoop, Spark, Cassandra, MongoDB, Hive, and similar technologies are used. These systems are designed for parallel processing of large volumes of data. Therefore, to be classified as Big Data, it must work with the help of AI that includes ML or TDM processes.

The dissertation applies *the absolute rights regime* to confidential information, such as official secrets, trade secrets, and production secrets. Due to the criterion of making Big Data results accessible to everyone, it was concluded that it is not advisable to apply *the Know-how protection (trade secret)* mechanism to Big Data.

The researcher put forward the view that it is not advisable to apply *the Patent Law Regime* to Big Data, since meeting the invention requirement, as well as conditions such as novelty, industrial applicability, intellectual creativity, and sufficient disclosure, is very difficult or impossible. From this perspective, the most optimal solution for Big Data relations and its protection may be the introduction ***of a special sui generis database rights regime,*** as none of the existing legal instruments can fully protect such results.

In the work, the application of the principle of causality in traditional tort law becomes complicated in the context of Big Data, as the issue of distributing responsibility among multiple perpetrators may remain unresolved, and the damage caused as a result of Big Data may not be materially quantifiable or may be abstract. The dissertation presents legal perspectives on the damage caused in the field of personal data protection, as well as in the areas of artificial intelligence and algorithm liability, and methods for compensation, illustrated through the examples of **the Clearview AI** case in the USA and **the Lloyd v. Google** case in Great Britain.

The third chapter of the dissertation is titled **Foreign experience in protecting big data (Big Data) and issues of improvement** and analyzes methods of civil law protection of Big Data, issues of legal regulation in the legislation of foreign countries, and prospects for developing legal regulation of relations related to Big Data.

In addition to traditional jurisdictional methods for effectively regulating legal relations associated with Big Data technologies, the scientific work analyzes modern non-jurisdictional (non-legal, but ensuring security and control) technical and organizational approaches.

In the dissertation, the researcher addressed the provisions of contract law, sui generis database rights, personal non-property rights, and competition law, while noting the general and special protection measures in civil legislation for Big Data relations (such as those provided for in Article 11 of the Civil Code). The study

emphasizes that ensuring Big Data security solely through regulatory frameworks is insufficient. Therefore, the work specifically highlights the necessity of widespread use of additional non-jurisdictional methods in Big Data relations, *including opt-in and opt-out (consent and withdrawal), encryption, pseudonymization and anonymization, access control, as well as data masking, audit and log systems.* The study also substantiates the need to reflect these innovations in legislation concerning personal data.

To enhance the practical significance of the dissertation, the researcher referred to famous court cases and practical examples such as *Google Spain SL v. Agencia Española de Protección de Datos (2014) - CJEU, Carpenter v. United States (USA, 2018), the DABUS case, and Google Shopping v EU.*

In the dissertation work on the legal regulation of Big Data in foreign countries' legislation, *the US model*, *EU* model, and *UK model* were selected. The US model (opt-out) does not impose strict control and restrictions on data processing, while the EU model is the opposite. In the EU, Big Data is regulated **by the General Data Protection Regulation (GDPR),** which came into force in 2018, and there is also a Sui Generis regime designed to regulate it. From this perspective, the EU model for regulating Big Data has been identified as the optimal solution for national legislation.

In the dissertation, the author emphasizes that the prospects for developing legal regulation of Big Data relations should be implemented in the following areas: *a) forming the Big Data concept in the era of the Internet of Things (IoT); b) improving organizational mechanisms for regulating Big Data relations;* and *c) harmonizing views on Big Data and international trends with civil law institutions.*

*Formation of the concept of Big Data in the era of Internet of Things (IoT)* has been substantiated in terms of providing a definition for the concept of Big Data and the need for its role in legal relations to be clearly reflected in legislation. The researcher has noted *that in the direction of improving organizational mechanisms in the regulation of Big Data relations,* it is necessary to designate the authorized body in this field and define its functions, as well as introduce a specially authorized position in large organizations working with Big Data, *such as a Data Protection Officer* (DPO). The integration of new Big Data challenges into civil legislation necessitates *the Third-Party Doctrine, improvement of pre-contractual processes, and certain exceptions to copyright law.*

Specifically, based on the experience of foreign countries' legislation and the content of the **fair use** principle, the work scientifically substantiates the need to introduce into national copyright legislation provisions on *the "safe harbor"* principle in relation to Text and Data Mining (TDM) activities. Such an approach can contribute to the stable and effective development of legal relations in the field of Big Data.

In the study, the author conducted a comparative legal analysis of one of the main factors in Big Data relationships - *the process of giving consent for data processing* - with the concept of acceptance within contract law. As a result, a scientifically grounded proposal has been put forward that in the context of Big Data

and personal data, the contracting process, particularly the consent mechanism, should be expressed in a complex and multi-stage form.

## CONCLUSION

As a result of the research work on the civil law regulation of big digital data (Big Data), the following scientific-theoretical and practical proposals and conclusions were developed regarding the improvement of legislative norms:

**I. Scientific and theoretical proposals and conclusions:**

1. The following author's definition of Big Data has been developed: *Big Data is a collection of data that coordinates the processes of collecting, storing, managing, analyzing, and processing information using artificial intelligence tools (algorithms), as well as consisting of a large volume of high-speed automated data from various sources of certain value.* It is determined that the main aspect of Big Data is characterized by the availability of processing capabilities for the data set using specific artificial intelligence tools.

2. During the research, Big Data was examined: *a) as a technology; b) as a database; c) as a complex institution integrating data and technologies; and d) as a legal phenomenon.* A legally substantiated conclusion was reached that Big Data is a dataset implemented using artificial intelligence tools.

3. The dissertation substantiated that the main distinguishing feature of Big Data from other types of information is its *value*, and it was determined that this is expressed in the following specific characteristics:

*Firstly*, the ability to satisfy specific needs and stimulate interest of a civil rights subject, particularly by creating unique goods or services or by implementing more effective corporate actions based on Big Data analysis;

*Secondly*, the potential (Big Data raw material) or actual (Big Data processing result) value of information for a certain and limited circle of individuals, which indicates that the value of specific information has a narrowly focused nature in a particular legal relationship;

*Thirdly*, the property of equivalent exchange;

*Fourthly*, the ability to collect and process Big Data is limited to a certain range of entities with the necessary capacity, which creates a uniquely restricted access to such data.

4. In the scientific work, Big Data is developed in two ways: initially, it involves creating a Big Data database (corpus), where data is collected from various open sources through the “Text and Data Mining” (TDM) system, and then the legal aspects of processing this data through the “Deep learning” system are substantiated.

5. Big Data a) *government data (Open data), b) electronic platform (e-platform) or data in other forms of information technology services, and c) user-generated information* (user-generated data) The formation of a database based on three groups of sources has been practically and theoretically substantiated.

6. According to the experience of foreign countries and the “Complexity Theory”, it is impossible to regulate Big Data processes by single legislation due to the fact that Big Data is a complex process and consists of various institutions.

Therefore, it was concluded that at a time when views on Big Data are not fully formed in our country, it is advisable to implement the mechanism for regulating Big Data processes using this doctrine.

7. The research demonstrates that Big Data processes in our country are currently regulated through information-related regulatory documents based *on legal analogies*. It also substantiates the necessity for a specialized, systematized law in this field.

8. The dissertation analyzes various approaches to Big Data as an object in civil law: *a) intangible object, b) new non-traditional object of intellectual property (data as intellectual property), c) digital asset (data as digital asset), and d) trade secret (data as trade secret)*. The study concludes that when determining the legal regime of Big Data, it is most appropriate to interpret it as a digital asset (intangible object) belonging to the group of non-traditional intellectual property objects. Consequently, it is necessary to recognize its content among the objects of civil law and regulate it through civil law institutions.

9. The following legal features of Big Data recognition as a digital asset were analyzed:

*a) digital form;*

*b) absence of material form;*

*c) the presence of a real or potential value;*

*d) rotational capacity;*

*e)* It is carried out using *special technical devices like AI* .It was determined that these symbols also have Big Data, which are also expressed in digital, intangible form, reproducible with the help of technical means, and have an economic value that allows for equivalent exchange.

10. The application of intellectual property law principles to Big Data processes was analyzed in the following areas: *a) protection as a copyright object; b) legal protection of databases; c) patent law; d) trade secret regime.* It was concluded that the *Sui Generis database regime* can only be applied to Big Data if it is recognized as a database according to the requirements of database legislation. Furthermore, implementing a special ***Sui Generis legal regime*** for Big Data relationships and its protection may be the most optimal solution, as none of the existing legal instruments can fully protect such results.

11. The work presents arguments for the necessity of expanding the list of intellectual property objects by including Big Data as a *new non-traditional object in the registry of intellectual property assets*.

12. Based on the experience of the legislation of foreign countries and the content of the principle *of fair use (fair use)* , it is proposed to introduce into the national copyright legislation *rules on a safe harbor for the extraction of text and data (Text and data mining, TDM)* . In this case, it is justified that it is possible to collect information through TDM systems in the author's legislation for non-commercial *a) use for scientific research and b) technical or non-communicative use of the work.*

13. Based on the experience of the legislation of foreign countries, it was concluded that such protective measures as *protection against delinquent and*

*parasitic behavior against illegal appropriation* can be used against initially in-demand, but quickly depreciating data created through AI-based TDM systems.

14. In the world of law, there are two main models of consent to the processing of personal data: *opt-in (EU model) and opt-out (US model).* After analyzing these models, it was substantiated that the national legislation was formed on the basis of the opt-in model, that is, organizations must obtain *clear and positive* consent before collecting or processing personal data.

15. It was substantiated that in the Big Data process, in addition to legal methods, other non-jurisdictional approaches should be applied when processing personal data, particularly in the collection, storage, and management of biometric and genetic personal information. Therefore, in Big Data relations, it is necessary to widely use additional non-jurisdictional methods, *such as opt-in and opt-out (agreement and withdrawal), encryption, pseudonymization and anonymization, access control, as well as data masking, audit and log systems* .

**II. Based on the research results, the following proposals and conclusions aimed at improving the norms of legislation were developed:**

16. It is proposed to state part two of Article 31 of the Constitution of the Republic of Uzbekistan in the following wording:

*Everyone has the right to privacy of correspondence, telephone conversations, postal, electronic and other messages, as well as* ***information relating to or allowing the identification of a person****. Restriction of this right is allowed only in accordance with the law and on the basis of a court decision.*

17. It is proposed to state Article 99 of the Civil Code of the Republic of Uzbekistan in the following wording:

*A person's life and health, honor and dignity, personal inviolability,* ***including the right to an identification number, location information, online identification information****, business reputation, privacy, private and family secrets, the right to a name, the right to an image, copyright, other personal non-property rights, and other intangible assets belonging to a citizen from birth or in accordance with the law are not subject to seizure and other alienation.*

18. It is proposed to supplement Article 370 of the Civil Code of the Republic of Uzbekistan with a fifth paragraph in the following wording:

*In relation to the processing of personal data, acceptance must be in the form of a written or electronic document.*

19. It is proposed to supplement paragraph fourteen of Article 1 of the Law of the Republic of Uzbekistan On Legal Protection of Programs for Electronic Computers and Databases, paragraph nine of Article 3 of the Law On Informatization, paragraph twelve of Article 3 of the Law On Principles and Guarantees of Freedom of Information, paragraph ten of Article 4 of the Law On Personal Data:

*Big Data - a collection of data that coordinates the processes of collecting, storing, managing, analyzing, and processing data using artificial intelligence tools (algorithms), as well as consisting of a large volume of high-speed automated data from various sources of a certain value.*

20. It is proposed to supplement the Law of the Republic of Uzbekistan On Copyright and Related Rights:

It is proposed to supplement Article 19 with an eighth part containing the following:

*The author who authorizes the reproduction of the work using artificial intelligence tools can withdraw this right at any time (opt-out).*

It is proposed to supplement Article 26 with an eighth paragraph containing the following:

*use or reproduction by means of artificial intelligence of disclosed works or excerpts from such works for scientific research purposes and not related to commercial activity, as well as after providing conditions for the withdrawal of the author's property rights at any time.*

21. The Law of the Republic of Uzbekistan On Personal Data:

It is proposed to restate the second paragraph of Article 4 as follows:

*Personal data - information recorded electronically, on paper and (or) on another tangible medium, relating to a specific individual or allowing their identification.* ***This refers to information that directly or indirectly relates to a person, particularly identifying information such as name, identification number, location information, online identifier, or information about a person's physical, physiological, genetic, mental, economic, cultural, or social characteristics.***

It is proposed to supplement Article 4 with a ninth paragraph containing the following:

*Consent to the processing of personal data - a free, clear, informative, and unambiguous expression of the will of a natural person. In this case, the subject must express their consent to the processing of their personal data through a statement or a clear affirmative action.*

It is proposed to supplement Article 21 with an eighth paragraph containing the following:

*The subject of personal data has the right to withdraw consent to the processing of data at any time. Withdrawal of consent does not affect the legality of data processing prior to withdrawal. Withdrawing consent should be as clear and easy as giving it.*

It is proposed to supplement with a new Article $27^2$ of the following content:

**Personal data protection methods**

*Legal methods of personal data protection are defined by law.*

*In certain circumstances, a person may use other non-jurisdictional methods not specified by law to protect their personal data.*

**III. Practical suggestions and recommendations:**

22. In order to effectively manage the information policy of large companies specializing in the provision of information services (processing of personal data), as well as to protect the rights and interests of consumers, it is necessary to apply in practice such agreements as *the Non-disclosure agreement (NDA), the Data Processing Agreement (DPA)* .

23. In order to manage information policy in large companies specializing in the provision of information services (processing of personal data), based on the

provisions of the GDPR and international experience, it is advisable to introduce the position *of Data Protection Officer (DPO)* .

In addition to these, other scientific and practical conclusions and proposals have been developed within the framework of the dissertation. All of these serve to properly establish a system for working with Big Data in Uzbekistan, provide comprehensive legal regulation, and define a balanced set of rights and interests for the parties involved in these relationships.

**НАУЧНЫЙ СОВЕТ DSc.07/30.12.2019.Yu.22.01 ПО ПРИСУЖДЕНИЮ УЧЕНЫХ СТЕПЕНЕЙ ПРИ ТАШКЕНТСКОМ ГОСУДАРСТВЕННОМ ЮРИДИЧЕСКОМ УНИВЕРСИТЕТЕ**

**ТАШКЕНТСКИЙ ГОСУДАРСТВЕННЫЙ ЮРИДИЧЕСКИЙ УНИВЕРСИТЕТ**

**ТОЖИБОЕВ САРВАР ЗАФАРОВИЧ**

# ГРАЖДАНСКО-ПРАВОВОЕ РЕГУЛИРОВАНИЕ БОЛЬШИХ ДАННЫХ (BIG DATA)

12.00.03 – Гражданское право. Предпринимательское право. Семейное право. Международное частное право

**АВТОРЕФЕРАТ**
**диссертации доктора философии (PhD) по юридическим наукам**

**Ташкент – 2025**

**Тема диссертации доктора наук (Doctor of Philosophy) зарегистрирована Высшей аттестационной комиссией при Министерстве высшего образования, науки и инноваций Республики Узбекистан за № B2024.3.PhD/Yu1534**

Диссертация выполнена в Ташкентском государственном юридическом университете.

Автореферат диссертации размещен на трех языках (узбекском, английском, русском (резюме)) на веб-сайте Научного совета (www.tsul.uz) и Информационно-образовательном портале «Ziyonet» (www.ziyonet.uz).

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Защита диссертации состоится «5» сентября 2025 года в 10:00 на заседании Научного совета DSc.07/30.12.2019.Yu.22.01 при Ташкентском государственном юридическом университете (Адрес: 100047, г. Ташкент, улица Сайилгох, 35. Тел.: (99871) 233-66-36; факс: (99871) 233-37-48; e-mail: info@tsul.uz).

С диссертацией можно ознакомиться в Информационно-ресурсном центре Ташкентского государственного юридического университета (зарегистрировано за №1414). (Адрес: 100047, г. Ташкент, ул. Амира Темура, 13. Тел.: (99871) 233-66-36).

Автореферат диссертации разослан «21» августа 2025 года.

(протокол реестра №84 от «21» августа 2025 года)

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## ВВЕДЕНИЕ (аннотация диссертации доктора философии (PhD))

**Цель исследования** состоит в разработке предложений и рекомендаций, направленных на повышение эффективности гражданско-правового регулирования больших данных и связанных с ними отношений, законодательства и правоприменительной практики в этой области.

**Объектом исследования** является система правоотношений, связанных с гражданско-правовым регулированием Big Data.

**Научная новизна исследования** заключается в следующем:

обосновано, что под информационным ресурсом следует понимать информацию в электронной форме, банки данных, базы данных, входящие в состав информационной системы, в том числе аудио-, видео-, графическую и текстовую информацию, размещаемую или публикуемую в открытом виде в информационных системах;

обосновано, что базы персональных данных, обрабатываемые без использования средств автоматизации, а также обрабатываемые в соответствии с законодательством о труде, не подлежат регистрации;

обосновано предложение о том, что при хранении биометрических и генетических данных в электронной форме эти данные должны быть зашифрованы и защищены криптографическими или другими методами;

обосновано, что собственник и (или) оператор должны принимать соответствующие меры безопасности для предотвращения кражи, удаления, уничтожения, несанкционированного получения, изменения и оставления без контроля материальных носителей, содержащих биометрические и генетические данные.

**Внедрение результатов исследования.** На основе результатов исследования по гражданско-правовому регулированию Big Data:

предложение относительно понятия информационного ресурса нашло отражение в пункте 1 статьи 3 Закона Республики Узбекистан от 21 апреля 2021 года № ЗРУ-683 “О внесении изменений и дополнений в некоторые законодательные акты Республики Узбекистан” (Акт Комитета Сената Олий Мажлиса Республики Узбекистан по судебно-правовым вопросам и противодействию коррупции от 30 августа 2023 года № 64). Внедрение данного предложения послужило созданию правовой основы для структуры и формы информационной системы;

предложение о том, что персональные данные, обрабатываемые без использования средств автоматизации и обрабатываемые в соответствии с законодательством о труде, не подлежат регистрации в базах персональных данных, закреплено в абзацах седьмом и восьмом части второй пункта 5 Положения “О государственном реестре баз персональных данных”, утвержденного постановлением Кабинета Министров от 8 февраля 2020 года No 71 (Акт Департамента информационно-аналитического и юридического обеспечения Секретариата Премьер-министра Республики Узбекистан от 30 июня 2025 года № 35). Внедрение данного предложения послужило

определению случаев, которые не могут рассматриваться как база персональных данных.

предложение о методах защиты, используемых при хранении биометрических и генетических данных в электронной форме, было использовано в пункте 4 Положения “О требованиях к материальным объектам, содержащим биометрические и генетические данные, и технологиям хранения таких данных вне баз персональных данных”, утвержденного Постановлением Кабинета Министров Республики Узбекистан № 570 от 5 октября 2022 года (Акт Департамента информационно-аналитического и юридического обеспечения Секретариата Премьер-министра Республики Узбекистан № 35 от 30 июня 2025 года). Внедрение данного предложения послужило разработке методов защиты персональных данных, а также мер безопасности, применяемых в этом направлении.

предложение о том, что собственник и (или) оператор должны принимать соответствующие меры безопасности для хранения материальных объектов, содержащих биометрические и генетические данные, было использовано в пункте 6 Положения “О требованиях к материальным объектам, содержащим биометрические и генетические данные, и технологиям хранения таких данных вне баз персональных данных”, утвержденного Постановлением Кабинета Министров Республики Узбекистан № 570 от 5 октября 2022 года (Акт Департамента информационно-аналитического и юридического обеспечения Секретариата Премьер-министра Республики Узбекистан № 35 от 30 июня 2025 года). Внедрение данного предложения послужило разработке соответствующих мер безопасности, предотвращающих кражу, удаление, уничтожение, несанкционированное получение, изменение и оставление без контроля материальных объектов с биометрическими и генетическими данными.

**Структура и объем диссертации.** Диссертация состоит из введения, трех глав, включающих девять параграфов, заключения, списка использованной литературы и приложений. Объем диссертации составляет 156 страниц.

## E’LON QILINGAN ISHLAR RO‘YXATI
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Avtoreferat TDYU Yuridik fanlar Axborotnomasi jurnali tahririyatida tahrirdan o‘tkazilib, o‘zbek, ingliz va rus tillaridagi matnlar o‘zaro muvofiqlashtirildi.

Bosishga ruxsat etildi: __.__.____-yil
Bichimi: 60x84 1/8, “Times New Roman”
garniturada raqamli bosma usulda bosildi.
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