

INNOVATION SCIENCE AND TECHNOLOGY



Scopus || Electronic journal specializing in Scopus

ISSUE 11



Acceptance of papers **November, 2025**



**Acceptance of
papers**

Published monthly



Topics

economics,
technology, social
sciences



EDITOR-IN-CHIEF:

Mirzaliyev Sanjar Makhmatjon ugli

DEPUTY EDITOR-IN-CHIEF:

Makhmudov Nosir Makhmudovich
DSc., Prof., Academician

DEPUTY EDITOR-IN-CHIEF:

Ochilov Bobur Bakhtiyor ugli – Senior
lecturer at TSUI

THE SCIENTIFIC-POPULAR ELECTRONIC
JOURNAL **"INNOVATION SCIENCE AND
TECHNOLOGY"** HAS BEEN REGISTERED
UNDER THE NUMBER **C-5669633** BY THE
AGENCY FOR INFORMATION AND MASS
COMMUNICATIONS (AOKA) OF THE
REPUBLIC OF UZBEKISTAN, EFFECTIVE
FROM OCTOBER 9, 2024.

CONTACTS

Phone: **+998 50 737 87 88**

Website: <https://ist-journal.uz>

Email: innovationist2025@gmail.com

The scientific electronic journal "Innovation Science and Technology" has been included in the list of scientific publications recommended for the publication of main scientific results of dissertations for the award of PhD and DSc degrees in economics and technical sciences, in accordance with the Resolution No. 370 of the Presidium of the Higher Attestation Commission of the Republic of Uzbekistan, dated May 8, 2025.

Electronic publication, Issue 11. 369 pages.
Approved for publication on November, 2025.

Editorial board:



Sharipov Kongiratbay Avezimbetovich,
Doctor of Technical Sciences (DSc), Professor



Abdurakhmanova Gulnora Kalandarovna,
Doctor of Economic Sciences (DSc), Professor



Cham Tat Huei,
Doctor of Philosophy (PhD), Professor (Malaysia)



Muhammad Imran Sadiq
Doctor of Philosophy in Economics (PhD),
Professor, Malaysia



Ahmed Aziz Ismail
Doctor of Technical Sciences (DSc),
Professor (Egypt)



Lee Chin
Doctor of Philosophy in Economics (PhD),
(Malaysia)



Asongu Simplicé
Doctor of Philosophy in Economics (PhD),
Cameroon



Rui Dang
Doctor of Chemistry (DSc), Professor, China



Zahoor Ahmed
Doctor of Philosophy in Economics (PhD), Turkey



Shujaat Abbas
Doctor of Philosophy in Economics (PhD), Russia



Tina A Coffelt
Doctor of Philosophy in Educational Sciences
(PhD), USA

CONTENTS

POVERTY AND DEVELOPMENT	14
Kholmirezayev Abdulhamid Khapizovich	
WAYS TO ACHIEVE ECONOMIC STABILITY THROUGH THE IMPLEMENTATION OF INNOVATIVE TECHNOLOGIES IN INDUSTRIAL ENTERPRISES	23
Sadriddinov Bakhtiyor	
STRUCTURE-PROPERTY RELATIONSHIP OF ORGANOSILICON MATERIALS: EVALUATION BASED ON THERMOGRAVIMETRIC ANALYSIS	36
Tosheva Dilfuza Farxodovna, Siddikov Ikrom Iminjonovich, Rakhimov Firuz Fazlidinovich	
"CREATING AN ALGORITHM AND SOFTWARE TOOL FOR PERSONAL IDENTIFICATION USING FACIAL SCANNING TO PROTECT THE OPERATING SYSTEM"	43
Usmonov Maxsud Tulqin o'g'li	
ENSURING INTERDISCIPLINARY INTEGRATION BASED ON MOBILE LEARNING TECHNOLOGIES.....	51
Zaripov Olimjan Kuvandiq son	
MONITORING OF THE AYDAR-ARNASAY LAKE SYSTEM AND ASSESSMENT OF THE CHEMICAL COMPOSITION OF COLLECTOR WATER INFLOWS INTO THE LAKE ECOSYSTEM.....	55
Erkabayev Furkat Ilyasovich, Madrimov Rajabboy Masharipovich, Aminov Khamza Khusanovich	
APPROBATION OF THE RESISTANCE OF BRICKS MADE FROM "ANGREN" SECONDARY KAOLIN TO THE EFFECT OF LIQUID METAL.....	62
Umurov Ulug'bek Meylievich	
THEORETICAL AND PRACTICAL FOUNDATIONS OF PERFORMANCE-BASED BUDGETING.....	68
Allakuliev Akmal Baltayevich	
IMPROVING ECONOMIC MECHANISMS THROUGH EFFECTIVE USE OF ORGANIZATIONAL AND LEGAL FRAMEWORKS IN TOURISM DEVELOPMENT.....	71
Abdusalomov Djamshid Abdusalomovich	
TEMPERATURE-RADIATION REGIME OF THE TERRITORY OF UZBEKISTAN FOR THE DESIGN OF SOLAR GREENHOUSES	76
Ilkhom Ismatovich Rakhmatov, Shakhzod Niyoz ogli Izomov	
THEORETICAL ASPECTS OF GREEN FINANCING IN FORMING A GREEN ECONOMY	81
Khalikov S. X.	
MUVAFFAQIYATLI STARTAP FAOLIYATIDA ROL O'YNOVCHI MUHIM OMILLAR VA O'ZBEKISTON SHAROITIDA STARTAP EKOTIZMINING RIVOJLANISHI.....	87
Qosimova Dilorom Sobirovna	
EFFECTIVENESS OF INNOVATION MANAGEMENT SYSTEMS.....	92
Umarova Nilufar Abdulkakhorkizi	
INFLUENCE OF INTERNATIONAL RANKING ORGANIZATIONS ON HIGHER EDUCATION INSTITUTIONS AND EXISTING PLATFORMS	96
Urozboev Khayrulla Murodboy ugli	
BASE STATION MONITORING TECHNOLOGIES IN MOBILE NETWORKS	103
Ibrokhimkhuja Rikhsikhujayev, Mohit Bhandwal	
FORMATION AND MANAGEMENT OF INVESTMENT PROJECTS OF ENTERPRISES	108
Abdunazarov Saidakhmat Abdumalikovich	
THE IMPORTANCE OF QUALITY MANAGEMENT IN ENTERPRISE ACTIVITY MANAGEMENT.....	113
Rasulov Shavkat Sharof son	
PARTICIPATORY BUDGETING OF THE STATE BUDGET	117
Khamidov Khabibullo Khikmatulla ogli	
TRANSFORMING THE HIGHER EDUCATION SECTOR THROUGH PUBLIC-PRIVATE PARTNERSHIP UNDER CONDITIONS OF DIGITALIZATION	123
Abdullayev Javohir Abdumalik og'li	
WAYS TO IMPROVE THE EFFICIENCY OF THE FINANCIAL MANAGEMENT SYSTEM IN ENTERPRISES.....	131
Begalov Sherzod Maxsutaliyevich	

DIRECTIONS FOR IMPROVING THE RESERVOIR SAFETY ASSESSMENT AND MANAGEMENT SYSTEM USING THE EXAMPLE OF THE TALIMARJON RESERVOIR.....	136
Xodjaqulova Nodira Xosiyatqul qizi	
ECONOMIC EFFICIENCY AND INNOVATIVE TRANSFORMATION PROCESSES OF DIGITAL TECHNOLOGY IMPLEMENTATION IN UZBEKISTAN'S OIL AND GAS INDUSTRY	141
Tarakhtiyeva Gulmira Kulbayevna	
INNOVATIVE APPROACHES TO RISK MANAGEMENT AND ASSESSMENT OF INVESTMENT PROJECTS IN THE DIGITAL ECONOMY.....	145
Muxitdinova Kamola Alisherovna	
INNOVATIVE COOPERATION AND MARKETING STRATEGIES FOR STRENGTHENING THE REGIONAL ECONOMY: THE CASE OF NAMANGAN REGION	149
Sattarov R. A.	
MARKETING PROBLEMS IN THE INTERNATIONAL TEXTILE MARKET AND FOREIGN EXPERIENCES IN SOLVING THEM.....	159
Musayeva Shoirazimovna	
THE PROBLEMS OF LINGUISTIC ANALYSIS OF ELLIPTICAL SENTENCES IN MODERN ENGLISH.....	165
Jurayeva Hilola Kamol qizi, Eshonkulov Ravshan Tokhirovich	
THE EFFECTIVENESS AND PROSPECTS OF INTEGRATING ARTIFICIAL INTELLIGENCE INTO URBAN SECURITY DEVELOPMENT	171
Iminov Akbarjon Odiljonovich	
21ST CENTURY CHANGES AND THE GROWING IMPORTANCE OF PROFESSIONAL ENGLISH PROFICIENCY	175
Rakhimova Shirin Utkurovna	
A COMPARATIVE STUDY OF UZBEKISTAN'S INNOVATION EFFICIENCY: EVALUATING GII OUTPUT-INPUT RATIOS RELATIVE TO LEADING AND EMERGING INNOVATIVE ECONOMIES	179
Umidjon Khoshimov	
ANALYSIS OF MODERN FINANCING MODELS FOR OUTSOURCING SERVICES IN PRESCHOOL EDUCATIONAL INSTITUTIONS AND THEIR EFFICIENCY	189
Khamidov Anis Choriyevich	
СРАВНИТЕЛЬНЫЙ АНАЛИЗ АРХИТЕКТУР ДИАЛОГОВЫХ СИСТЕМ ДЛЯ МЕДИЦИНСКОЙ ПРЕДМЕТНОЙ ОБЛАСТИ	195
Гофуржонов Мухаммадали Расулжон угли, Бурханова Айгуль Ильясовна	
EFFICIENT USE OF FINANCIAL RESOURCES IN UZBEKISTAN'S FORESTRY SECTOR	201
Mamatqulova Muxlisaxon Mamirjanovna	
ESG RISKS AND CORPORATE ACCOUNTABILITY: GLOBAL LESSONS AND IMPLICATIONS FOR UZBEKISTAN	206
Zakhidov Azizbek Rustamovich	
PRACTICE OF FOREIGN COUNTRIES IN PROVIDING FINANCING FOR ENTREPRENEURS' INNOVATIVE INITIATIVE.....	211
Jubanova Bayramgul	
SAMARQAND VILOYATIDA IJTIMOYIY XIZMATLAR SOHASINING RIVOJLANISH DARAJASI VA SAMARADORLIK KO'RSATKICHLARI.....	216
Berdiyeva Nafisa Qahramonovna	
TOURISM SERVICES MANAGEMENT AND IMPROVEMENT IN UZBEKISTAN	221
Otaxonova Iroda Xamdami qizi	
TO'G'RIDAN-TO'G'RI XORIJIY INVESTITSİYALARNING O'ZBEKISTONDA IQTISODIY BARQARORLIKNI TA'MINLASHDAGI AHAMIYATI VA UNING DINAMIK TAHLILI	228
Abdurasul A.Sobirov	
O'ZBEKISTON RESPUBLIKASIDA TADBIRKORLIKNI TASHKIL ETISHDA MOLIYAVIY TAVAKKALCHILIKNI BAHOLASH	233
Bayxonov Baxodirjon Tursunbayevich	
ANALYZING N-SHAPED ENERGY VERSUS ENVIRONMENT MODEL: EVIDENCE FROM UZBEKISTAN.....	240
Xalimjonov Nurbek Ulug'bek o'g'li, Toxirov Shodiyor Zafar o'g'li, Jumamuratov Sultanbek Iyasovich	

PROSPECTS FOR DEVELOPING SUSTAINABLE TOURISM IN UZBEKISTAN.....	248
Alieva Makhbuba Toychievna	
EXPANDING THE FINANCIAL CAPABILITIES OF LOW-INCOME FAMILIES THROUGH DIGITAL FINANCIAL SERVICES.....	252
Bauyetdinov M.J., Djumamuratova Xurliman	
ANALYSIS OF FACTORS AFFECTING THE EFFICIENCY OF PUBLIC PROCUREMENT.....	258
Abdurakhmonova Mahliyo Nurmamatovna	
THE IMPACT OF SMALL AND MEDIUM ENTERPRISE FINANCING ON ECONOMIC GROWTH: EMPIRICAL EVIDENCE FROM UZBEKISTAN.....	262
Aziza Farmonovna Ergasheva, Rustam Olimjonovich Oltinov	
ANALYSIS OF FACTORS INFLUENCING THE ACTIVITIES OF THE COMPANY'S SALES NETWORK.....	277
Usmanov Ilkhom Achilovich	
NODAVLAT OLIY TA'LIM MUASSASALARINING TIZIMLI RIVOJLANISHIDA MARKETING FAOLIYATINING SAMARADORLIGINI OSHIRISH.....	282
Yuldashov Isomiddin Sidiqovich	
LEVERAGING OPEN INNOVATION AND DIGITAL PLATFORMS TO ACCELERATE SUSTAINABLE STARTUP ECOSYSTEM DEVELOPMENT IN EMERGING ECONOMIES.....	288
Azamov Sardor Telman ugli	
PROSPECTS FOR ENSURING BALANCE BETWEEN INDUSTRIAL SECTORS IN THE TERRITORIES OF THE ZARAFSHAN REGION.....	297
Murtazayev Isabek Bazarbayevich	
THE IMPACT OF ECONOMIC GROWTH ON UNEMPLOYMENT IN CENTRAL ASIA.....	306
Kungratov Ilmurod Kuzibay ugli, Jumayev Samariddin Sayfiddin ugli	
EKOTURIZMNING BARQAROR RIVOJLANISHDAGI AHAMIYATI: TABIIY RESURSLARNI MUHOFAZA QILISH VA MAHALLIY HAMJAMIYATLARNI QO'LLAB-QUVVATLASH MASALALARI.....	313
Hamzayeva Dilfuza Samarovna	
THE ESSENCE, IMPORTANCE, AND NECESSITY OF INNOVATION ACTIVITY IN SMALL ENTERPRISES.....	320
Yuldashev Kodirjon Mamadjanovich	
EFFECTIVE MANAGEMENT OF THE FINANCIAL STABILITY OF THE ENTERPRISE.....	326
Baymuratova M.M.	
ENHANCING FINANCING MECHANISMS FOR EARLY CHILDHOOD AND SCHOOL EDUCATION FACILITIES: INTERNATIONAL LESSONS FOR UZBEKISTAN.....	331
Murodbek Boltaboev	
THE IMPACT OF DIGITAL PAYMENT SYSTEMS DEVELOPMENT ON THE BANKING SECTOR: A COMPARATIVE ANALYSIS OF CENTRAL ASIAN COUNTRIES.....	337
Aziza Farmonovna Ergasheva, Rustam Olimjonovich Oltinov	
STRENGTHENING GRADUATE ENTREPRENEURSHIP THROUGH INSTITUTIONAL AND FINANCIAL SUPPORT MECHANISMS.....	350
Valiyev Umid Gulamovich	
MATHEMATICAL MODEL FOR PREDICTING THE DYNAMIC EVOLUTION OF CRACKS IN URBAN CONSTRUCTION STRUCTURES.....	355
Sh. A. Anarova, M. N. Samidov	
TURIZM TARMOG'INI RAQAMLI TRANSFORMATSIYA QILISHDA BIG DATA TEXNOLOGIYALARIDAN SAMARALI FOYDALANISH.....	364
Maxmudova Aziza Pirmamatovna	

TURIZM TARMOG'INI RAQAMLI TRANSFORMATSIYA QILISHDA BIG DATA TEXNOLOGIYALARIDAN SAMARALI FOYDALANISH

Maxmudova Aziza Pirmamatovna

“Ipak Yo‘li” turizm va madaniy meros xalqaro universiteti tadqiqotchisi

E-mail: azizamakhmudova2@gmail.com

ORCID: 0009-0003-3406-9225

Annotatsiya: Ushbu maqolada mamlakatimizda turizm sohasini rivojlantirishda innovatsion texnologiyalardan, xususan, bugungi kunda ushbu sohada tizimli ma'lumotlar bilan ishlash uchun eng qulay bo'lgan Big Data texnologiyalaridan foydalanish yo'llari va istiqbollari keltirilgan.

Kalit so'zlar: Global internet tarmog'i, dasturiy-apparat tizimlari, Big Data texnologiyasi, shaxsiylashtirilgan turistik mahsulotlar, potensial turistik iste'molchilar, jozibali turistik mahsulotlar, malakali kadrlar, sayyohat maqsadlari.

Abstract: This article presents the ways and prospects for using innovative technologies in the development of the tourism sector in our country, in particular Big Data technologies, which are currently the most convenient for working with systematic data in this area.

Key words: Global Internet, software and hardware systems, Big Data technology, personalized tourism products, potential tourism consumers, attractive tourism products, qualified personnel, tourism goals.

Аннотация: В данной статье представлены пути и перспективы использования инновационных технологий в развитии туризма в нашей стране, в частности, технологий Big Data, которые сегодня наиболее удобны для работы с систематическими данными в этой области.

Ключевые слова: Глобальная сеть Интернет, программно-аппаратные системы, технология Big Data, персонализированные туристические продукты, потенциальные туристические потребители, привлекательные туристические продукты, квалифицированные кадры, цели путешествий.

KIRISH

Bugungi kunda turizm sohasi jadal rivojlanayotgan sohalardan biri bo'lib, ushbu soha mamlakatimiz hududlari iqtisodiy yuksalishining katalizatoriga aylanib bormoqda. Bu borada Hukumatimiz tomonidan ham ushbu sohaning rivoji uchun yetarlicha e'tibor qaratilmoqda. Xususan, O'zbekiston Respublikasi Prezidenti Sh.M. Mirziyoyevning 2023-yil 26-apreldagi “Respublikaning turizm salohiyatini jadal rivojlantirish hamda mahalliy va xorijiy turistlar sonini yanada oshirishga doir qo'shimcha chora-tadbirlar to'g'risida”gi PQ-135-sonli qarori, O'zbekiston Respublikasi Vazirlar Mahkamasining 2024-yil 7-dekabrda “Turizm sohasini raqamlashtirish va turistik xizmatlarni yagona platformaga birlashtirish chora-tadbirlari to'g'risida”gi 820-sonli qarori shular jumlasidandir.

Zamonaviy axborot texnologiyalarining rivojlanishi dasturiy-apparat tizimlarining, jumladan, global internet tarmog'ining aloqa kanallarining doimiy takomillashtirilishi va ularning oddiy iste'molchilar uchun mavjudligi hamda yangi internet foydalanuvchilari sonining o'sishida namoyon bo'ladi. Buning natijasida ishlab chiqarilayotgan ma'lumotlar hajmining doimiy o'sishini ta'minlash imkoniyati oshadi. Katta hajmdagi ma'lumotlarni saqlash, qayta ishlash, tahlil qilish va tarqatishda yuzaga kelayotgan muammolarni hal qilishda tizimli ma'lumotlar bilan ishlash uchun mo'ljallangan Big Data texnologiyasining o'rni beqiyosdir.

Big Data texnologiyasini ma'lumot olish uchun mo'ljallangan texnologiyalar to'plami sifatida belgilash mumkin. Aytish joizki, katta ma'lumotlar to'plamini tahlil qilish orqali Big Data texnologiyalaridan foydalanish kelajakda yangi bilimlarni olish imkonini beradi. Ushbu texnologiyani amaliy qo'llash imkoniyatlariga to'xtalsak,

turistik korxonalar Big Datadan mijozlarga xizmat ko'rsatish, operatsion samaradorlik va risklarni boshqarish sohalarida foydalanadilar.

MAVZUGA OID ADABIYOTLAR SHARHI

Mamlakatimizda raqamli texnologiyalardan foydalanish asosida turizm sohasini rivojlantirish masalalari bo'yicha bir qator olimlarning ilmiy ishlarida va tadqiqotlarida keng yoritilgan. Xususan, I.S. Tuxliev, M.Q. Pardaev, A.A. Eshtaev, M.T. Alimova, A.S. Abduxamidov va boshqalarning tadqiqotlarida ushbu masalalarga keng e'tibor qaratilgan.

TADQIQOT METODOLOGIYASI

Ushbu tadqiqotda turizm tarmog'ini raqamli transformatsiya qilish jarayonida Big Data texnologiyalaridan samarali foydalanish imkoniyatlarini aniqlashga alohida e'tibor qaratildi. Tadqiqot metodologiyasi nazariy, amaliy va statistik yondashuvlar uyg'unligiga asoslangan. Avvalo, turizm sohasida raqamlashtirish jarayonlari, Big Data texnologiyasining mazmuni, uning ustun jihatlari va jahon amaliyotidagi qo'llanishi bo'yicha ilmiy adabiyotlar, xalqaro hisobotlar hamda amaldagi normativ-huquqiy hujjatlar nazariy tahlil qilindi. Shuningdek, rivojlangan mamlakatlarda Big Data texnologiyalarining turizm industriyasida qo'llanish tajribasi O'zbekiston sharoiti bilan taqqoslanib, mavjud farqlar va o'xshash jihatlari aniqlab borildi.

Tadqiqotning navbatdagi bosqichida turizm infratuzilmasida shakllanuvchi ma'lumotlar oqimi, statistik ko'rsatkichlar va ochiq axborot manbalarida mavjud bo'lgan raqamli ma'lumotlar to'plami o'rganilib, ularga statistik-analitik yondashuv asosida ishlov berildi. Ma'lumotlarning tarkibi, hajmi va dinamikasini o'rganish orqali Big Data texnologiyalarining turizm sohasida qo'llanilish darajasi va samaradorligi baholandi. Zarurat tug'ilgan hollarda turizm tashkilotlari vakillari hamda raqamli texnologiyalar bo'yicha mutaxassislar bilan ekspert suhbatlari o'tkazilib, amaliy jarayonda uchraydigan muammolar, texnologik ehtiyojlar va mavjud imkoniyatlar yuzasidan qo'shimcha ma'lumotlar olindi.

Yakuniy bosqichda mavjud ma'lumotlar umumlashtirilib, tahlil natijalari asosida Big Data texnologiyalaridan foydalanishning istiqbollari, turizm industriyasining raqobatbardoshligini oshirishga qaratilgan mexanizmlar va kutilayotgan samaralar analitik-prognoz metodi asosida baholandi. Ushbu yondashuvlar tadqiqot mavzusining ilmiy asoslangan xulosalarini shakllantirish imkonini berdi.

TAHLIL VA NATIJALAR

Bugungi kunda mamlakatimiz turizm sanoatida Big Data texnologiyasidan foydalanish masalalari juda dolzarbdir, chunki turizm sanoatining yanada jadal rivojlanishi turizmni rejalashtirish va tashkil etishda tizimli yondashuvni talab qiladi. Turizm sohasida shaxsiylashtirilgan turistik mahsulotni loyihalashda ham, ommaviy turizm mahsulotini bozorda ilgari surish strategiyasini shakllantirishda ham foydalanish mumkin bo'lgan katta hajmdagi ma'lumotlar to'plangan. Big Data texnologiyasidan foydalanish sayyohlar haqida ularning turistik xulq-atvori, sayyohat yo'nalishlarini tanlash, joylashtirish vositalarini saralash mezonlari va boshqalar bo'yicha yangi bilimlarni olish imkonini beradi. Yuqorida ta'kidlanganidek, ushbu texnologiyalardan kelajakda turistning bunday shakllangan imidjidan bozor ehtiyojlariga mos keladigan turizm mahsulotlarini ishlab chiqishda foydalanish mumkin. Shuningdek, Big Data texnologiyalaridan turistik mahsulotlar va destinasiyalarni ilgari surish uchun axborot ta'minotida foydalanish mumkin. Ushbu texnologiya foydalanuvchilar haqidagi sayohat ma'lumotlari asosida ma'lum bir iste'molchiga qaratilgan reklama xabarini shakllantirish orqali turistik mahsulotlarni avtomatlashtirilgan xarid qilishni amalga oshirish imkonini beradi.

Ushbu sohaga oid xalqaro tajribani o'rganish asosida Amadeus tizimi Big Data texnologiyasidan foydalanish orqali butun dunyo bo'ylab sayyohlar faoliyati to'g'risidagi ma'lumotlarni to'plash va qayta ishlash uchun ushbu tizimdan foydalanishi, uning yordamida turistik mahsulotning potensial iste'molchisining eng ishonchli portretini, shu jumladan turizm turlari, yo'nalishlari va sayyohat maqsadlari va boshqalarni yaratish mumkinligi aniqlandi. Big Data texnologiyasidan foydalanish bo'yicha yana bir muvaffaqiyatli tajriba turizm bilan bog'liq bo'lgan aviakompaniya sanoatida qo'llashning afzalligida ekanligi aniqlandi. Masalan, Britaniyaning British Airways aviakompaniyasi kompaniyaning sodiqlik dasturida ishtirok etayotgan mijozlar haqidagi ma'lumotlarni tahlil qilish natijalaridan o'zining iste'molchilar talabi monitoringi dasturida foydalanadi.

Big Data atamasi katta hajmdagi ma'lumotlarni saqlash, qayta ishlash, tahlil qilish va tarqatishni tashkil etish uchun yechimlarni taqdim etadigan texnologiyalarni anglatadi. Shuningdek, ma'lumotlarni qayta ishlash va tahlil qilish natijasida Big Data texnologiyasi keyinchalik narxlash, jozibali turistik mahsulot yaratish va boshqalar kabi biznes jarayonlarni optimallashtirish uchun ishlatilishi mumkin bo'lgan yangi bilimlarni olishga yordam beradi.

Mamlakatimizda ham turizm sohasida ushbu texnologiyalardan foydalanish va qo'llash imkoniyati mavjud, ammo turistik korxonalar ulardan foydalanishda bir qator qiyinchiliklarga duch kelmoqda. Ushbu texnologiyani ishga joriy etish u bilan ishlash uchun yetarli darajada bilim va malakaga ega bo'lgan, shu yo'nalishda tayyorlangan mutaxassislarni jalb qilishni talab qiladi. Xususan, sohada malakali kadrlarning yetishmasligi mamlakatimizda Big Datani joriy etishdagi asosiy qiyinchiliklardan biridir. Big Data ma'lumotlarining texnik infratuzilmasi turli texnologiyalarning bir-biri bilan integratsiyalashuvini talab qiladi.

Turistik tashkilotlar ish jarayoniga Big Data ma'lumotlarining kiritilishi korxonalariga bir qator imkoniyatlar va afzalliklar beradi. Biroq ushbu texnologiyalardan foydalanishda jarayonga qarshilik qiladigan bir qancha to'siqlarga duch kelishi mumkin. Bunday to'siqlarga quyidagilar kiradi:

- zarur tayyorgarlikka ega malakali xodimlarning yetishmasligi;
- ushbu texnologiyani amalga oshirishda yuqori xarajat talab qilinishi;
- Big Data texnologiyasini korxonalar ishida joriy etish bo'yicha yetarli tajribaning yetishmasligi va h.k.

Big Data texnologiyasidan foydalanish asosida quyidagi ma'lumotlar manbalarini qayta ishlash mumkin:

- ochiq ma'lumotlar – ijtimoiy, iqtisodiy va boshqa ochiq manbalar asosida olinadigan ma'lumotlar;
- ijtimoiy tarmoqlar – ijtimoiy tarmoqlar foydalanuvchilari tomonidan shaxsiy sahifalarda ixtiyoriy ravishda e'lon qilingan ma'lumotlar;
- internet vositalari (Internet of Things – IoT), smartfonga o'rnatilgan sensorlar, aqlli soat, foydalanuvchi faoliyati haqida turli ma'lumotlarni yozib oladigan fitnes-trekerlar;
- shaxsiy ma'lumotlar – anonim ma'lumotlar: tibbiy yozuvlar, bajariladigan ishlar ro'yxati va hokozolar;
- tijorat operatsiyalari – bank operatsiyalari va internetda amalga oshirilgan boshqa to'lovlar orqali olinadigan ma'lumotlar.

Big Data texnologiyasidan foydalanish biznes uchun quyidagi imkoniyatlar va afzalliklarni ochib beradi:

- shaxsiylashtirish, ya'ni har bir mijoz uchun uning afzalliklari va moliyaviy imkoniyatlarini hisobga olgan holda shaxsiy taklif yaratish;
- mijozning mahsulotni real vaqtda ishlatish tajribasi haqida ma'lumot olish;
- iste'molchilar talabiga asoslangan narxlarni dinamik tartibga solish imkoniyati;
- bozorning asosiy tendensiyalari to'g'risida ob'ektiv ma'lumot olish;
- marketing xarajatlari samaradorligini oshirish orqali ularning narxini pasaytirish imkoniyati.

Shunga ko'ra, katta hajmdagi ma'lumotlarni qayta ishlash va tahlil qilish orqali Big Data texnologiyalaridan foydalanish mazmunli natijalar va foyda olish nuqtai nazaridan yangi biznes imkoniyatlarini ochadigan yangi bilimlarni olish imkonini beradi, degan xulosaga kelish mumkin.

Big Datadan amaliy foydalanishga kelsak, turistik tashkilotlar ushbu texnologiyadan mijozlarga xizmat ko'rsatish, operatsion samaradorlik va xatarlarni boshqarish sohalarida foydalanadilar. Turizm biznesida Big Data ma'lumotlaridan foydalanishning ko'plab usullari mavjud. Shu bilan birga, uning quyidagi yo'nalishlarini ajratish mumkin:

- mijozlarga xizmat ko'rsatish sifatini oshirish – bu orqali mijozlar ma'lumotlarini tahlil qilish imkoniyati tug'iladi;
- ichki jarayonlarni boshqarishni takomillashtirish – bu turistik tashkilotlarga biznes operatsiyalarni optimallashtirish va o'z biznes jarayonlarini yanada samarali avtomatlashtirish imkonini beradi;
- marketing samaradorligini oshirish – bu orqali eng samarali marketing kanallarini tanlash va yangi mijozlarni jalb qilish imkoniyati tug'iladi;
- xarajatlarni boshqarish va narxlash – bu orqali turistik korxonalar byudjetlarni optimallashtirishi, xarajatlarni yanada samarali boshqarishi mumkin.

XULOSA VA TAKLIFLAR

Big Data texnologiyasini tavsiflovchi ilmiy adabiyotlar va ochiq manbalarni tahlil qilish asosida turizm sohasida ushbu texnologiyadan foydalanishning aniq misollari va uning yordamida doimiy ravishda to'planib boradigan katta hajmdagi ma'lumotlar olinishi mumkinligi aniqlandi.

Turizm sohasida Big Data texnologiyasidan foydalanish katta hajmdagi ma'lumotlarni saqlash, uzatish va qayta ishlashni tashkil etishga yordam beradi, shuningdek, yangi bilimlarni tahlil qilish va yuklab olish usullarini osonlashtiradi. Ushbu texnologiyalarni qo'llash asosida turizm sohasida sezilarli natijalarga erishish, sayyohlar sonini ko'paytirish, xizmat ko'rsatish sifatini yaxshilash va sotish hajmini oshirish imkoniyati ortadi.

Big Data texnologiyasi turizm sohasida joriy bozor holatini o'rganish va har bir mijozni yanada chuqurroq tushunish vositasidir. Bularning barchasi shaxsiylashtirilgan yondashuv va mijozlar ehtiyojini aniqroq prognoz qilish uchun ajoyib asos bo'lib xizmat qiladi. Shu tufayli, Big Data texnologiyalaridan foydalanish mintaqalarda turizm sohasining raqobatbardosh ustunligini sezilarli darajada oshiradi, deb hisoblaymiz.

Foydalanilgan adabiyotlar ro'yxati

1. O'zbekiston Respublikasi Prezidenti Sh.M. Mirziyoyevning 2023-yil 26-apreldagi "Respublikaning turizm salohiyatini jadal rivojlantirish hamda mahalliy va xorijiy turistlar sonini yanada oshirishga doir qo'shimcha chora-tadbirlar to'g'risida"gi PQ-135-sonli qarori. <https://lex.uz/uz/docs/-6456786>
2. O'zbekiston Respublikasi Vazirlar Mahkamasining 2024-yil 7-dekabrda "Turizm sohasini raqamlashtirish va turistik xizmatlarni yagona platformaga birlashtirish chora-tadbirlari to'g'risida"gi 820-sonli qarori. <https://lex.uz/docs/7252698>
3. Tuxliev I. S., Abduxamidov S. A. Turizm: nazariya va amaliyot. Darslik (uchinchi nashr). T.: "Fan va texnologiyalar" nashriyot-matbaa uyi, 2021. 424 b.
4. Eshtaev A.A. Globallashuv sharoitida turizm industriyasini boshqarishning marketing strategiyasi (O'zbekiston Respublikasi turizm tarmog'i misolida). Doktorlik dissertatsiyasi avtoreferati. 2019-y. 120 b.
5. Abduqhamidov A. S., Makhmudova A. P. (2022). Prospects for the Development of Recreational Tourism in Uzbekistan. Builders of the Future, 2(02), 31-38.
6. Makhmudova A. (2019). Enhancement of the Ecotourism Efficiency in the Republic of Uzbekistan: Experience of the Developed Countries. Indonesian Journal of Law and Economics Review, 3, 10-21070.

Proofreader: Zokir ALIBEKOV

Layout and Designer: Oloviddin Sobir ugli

2025. № 11

© When materials are reproduced, the INNOVATION SCIENCE AND TECHNOLOGY journal must be cited as the source. Authors are responsible for the accuracy of the information in materials and advertisements published in the journal. Editorial opinions may not always align with those of the authors. Submitted materials will not be returned to the editorial office.

To publish articles in this journal, you may submit articles, advertisements, stories, and other creative materials through the following links. Materials and advertisements are published on a paid basis.

You may subscribe to the journal at any time using the following details. Once subscribed, please send a screenshot or photo of your payment confirmation to our Telegram page @iqtisodiyot_77. Based on this, we will send the latest issue of the journal to your address each month.

“The journal “INNOVATION SCIENCE AND TECHNOLOGY” has been registered by the Agency for Information and Mass Communications under the Administration of the President of the Republic of Uzbekistan from 09.10.2024 under the registration number №390637. License number: C-5669633. PNFL: 30407832680027

Our address: Tashkent city, Yunusobod district, 19th block,
House 17.



Acceptance of articles

Published every
monthly



Directions

Social, economic, political,
technological, scientific



Scopus || Scientific electronic journal specializing in Scopus

CERTIFICATE NUMBER: №390637

**ORDER NUMBER ACCORDING TO
THE LICENSE REGISTER: C-5669633**

CONTACT:



Contact us
+998 50 737 87 88



Telegram channel
t.me/scopus_IST2100



Journal official website
<https://ist-journal.uz/index.php/IST>