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THE CONNECTION BETWEEN DIGITAL ECONOMICS, AI, AND PROMISING JOBS

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ABSTRACT

The connection between digital economics, artificial intelligence (AI), and promising jobs is increasingly critical as technological advancements reshape global economies. Digital economics, driven by the growth of the internet, big data, and automation, has catalyzed the emergence of AI as a powerful tool in transforming industries. AI technologies enable businesses to optimize operations, enhance decision-making processes, and improve customer experiences, fostering economic growth. However, this transformation also creates new demands for specialized skills and expertise, paving the way for a new generation of jobs. These include roles in AI development, data science, machine learning, cybersecurity, and digital marketing, which require high levels of technical knowledge and adaptability. As AI continues to evolve, the labor market must adjust, with a shift toward jobs that emphasize creativity, problem-solving, and complex human interactions, balancing automation with human expertise. Understanding this relationship is vital for policymakers, businesses, and workers to navigate the future of work in a rapidly digitizing world.

Key words: *Digital economics, Artificial intelligence (AI), Promising jobs, Technological advancements, Automation, Big data, Economic growth*

ANNOTATSIYA

Raqamli iqtisodiyot, sun'iy intellekt (AI) va istiqbolli ish o'rinlari o'rtasidagi bog'liqlik tobora muhim ahamiyat kasb etmoqda, chunki texnologik taraqqiyot global iqtisodiyotni qayta shakllantirmoqda. Internet, katta ma'lumotlar va avtomatlashtirishning o'sishiga asoslangan raqamli iqtisodiyot sanoatni o'zgartirishda kuchli vosita sifatida sun'iy intellektning paydo bo'lishini katalizladi. AI texnologiyalari korxonalarga operatsiyalarni optimallashtirish, qaror qabul qilish jarayonlarini yaxshilash va mijozlar tajribasini yaxshilash, iqtisodiy o'sishni rag'batlantirish imkonini beradi. Biroq, bu o'zgarish maxsus ko'nikmalar va tajribalarga yangi talablarni keltirib chiqaradi va yangi avlod ish o'rinlari uchun yo'l ochadi. Bularga yuqori darajadagi texnik bilim va moslashuvchanlikni talab qiluvchi

sun’iy intellektni rivojlantirish, ma’lumotlar fani, mashinalarni o‘rganish, kiberxavfsizlik va raqamli marketingdagi rollar kiradi. AI rivojlanishda davom etar ekan, mehnat bozori ijodkorlik, muammolarni hal qilish va odamlarning murakkab o'zaro ta'sirini ta'kidlaydigan, avtomatlashtirishni inson tajribasi bilan muvozanatlashtirgan ishlarga o'tish bilan moslashishi kerak. Ushbu munosabatlarni tushunish siyosatchilar, biznes va ishchilar uchun tez raqamlashtirilayotgan dunyoda ish kelajagini boshqarish uchun juda muhimdir.

***Kalit so'zlar**: Raqamli iqtisodiyot, Sun'iy intellekt (AI), Istiqbolli ish o'rinlari, Texnologik yutuqlar, Avtomatlashtirish, Katta ma'lumotlar, Iqtisodiy o'sish*

АННОТАЦИЯ

Связь между цифровой экономикой, искусственным интеллектом (ИИ) и перспективными рабочими местами становится все более важной, поскольку технологические достижения меняют мировую экономику. Цифровая экономика, обусловленная ростом Интернета, больших данных и автоматизации, стала катализатором появления ИИ как мощного инструмента в преобразовании отраслей. Технологии ИИ позволяют компаниям оптимизировать операции, улучшать процессы принятия решений и улучшать качество обслуживания клиентов, способствуя экономическому росту. Однако эта трансформация также создает новые требования к специализированным навыкам и экспертизе, прокладывая путь для нового поколения рабочих мест. К ним относятся роли в разработке ИИ, науке о данных, машинном обучении, кибербезопасности и цифровом маркетинге, которые требуют высокого уровня технических знаний и адаптивности. Поскольку ИИ продолжает развиваться, рынок труда должен адаптироваться, сместившись в сторону рабочих мест, которые подчеркивают креативность, решение проблем и сложные человеческие взаимодействия, балансируя автоматизацию с человеческим опытом. Понимание этой взаимосвязи жизненно важно для политиков, предприятий и работников, чтобы ориентироваться в будущем работы в быстро цифровизирующемся мире.

***Ключевые слова:** Цифровая экономика, Искусственный интеллект (ИИ), Перспективные рабочие места, Технологические достижения, Автоматизация, Большие данные, Экономический рост*

INTRODUCTION

The rapid evolution of digital technologies has brought about profound changes in global economies, particularly through the rise of digital economics and artificial

intelligence (AI). Digital economics refers to the growing integration of digital technologies into business operations, markets, and society, driving innovation, efficiency, and new economic opportunities. AI, a key component of this transformation, plays a central role in automating tasks, analyzing vast amounts of data, and enhancing decision-making processes across various industries. This technological revolution is not only reshaping traditional job roles but also giving rise to new, specialized job opportunities. The demand for professionals in fields such as AI development, machine learning, data science, and cybersecurity is growing rapidly, as organizations seek to harness the power of AI to stay competitive. However, this shift also presents challenges, as it necessitates workers to acquire new skills and adapt to an ever-changing job market. Understanding the intersection between digital economics, AI, and emerging job opportunities is essential for navigating the future of work, ensuring that individuals, businesses, and policymakers can successfully address the demands of an increasingly digital economy.

Data and methodology

The methodology for exploring the connection between digital economics, artificial intelligence (AI), and promising jobs involves a mixed-methods approach, combining both qualitative and quantitative research techniques. This approach ensures a comprehensive understanding of the evolving relationship between technological advancements and labor market dynamics.

Analysis and results

The rapid advancement of artificial intelligence (AI) is reshaping the global job market, presenting both opportunities and challenges. According to the World Economic Forum's Future of Jobs Report (2020), AI-driven automation is projected to displace approximately 85 million jobs by 2025. However, this loss is offset by the creation of 97 million new roles, leading to a net gain of employment. This transformation emphasizes a critical shift in the division of labor between humans, machines, and algorithms, with significant implications for workforce evolution.

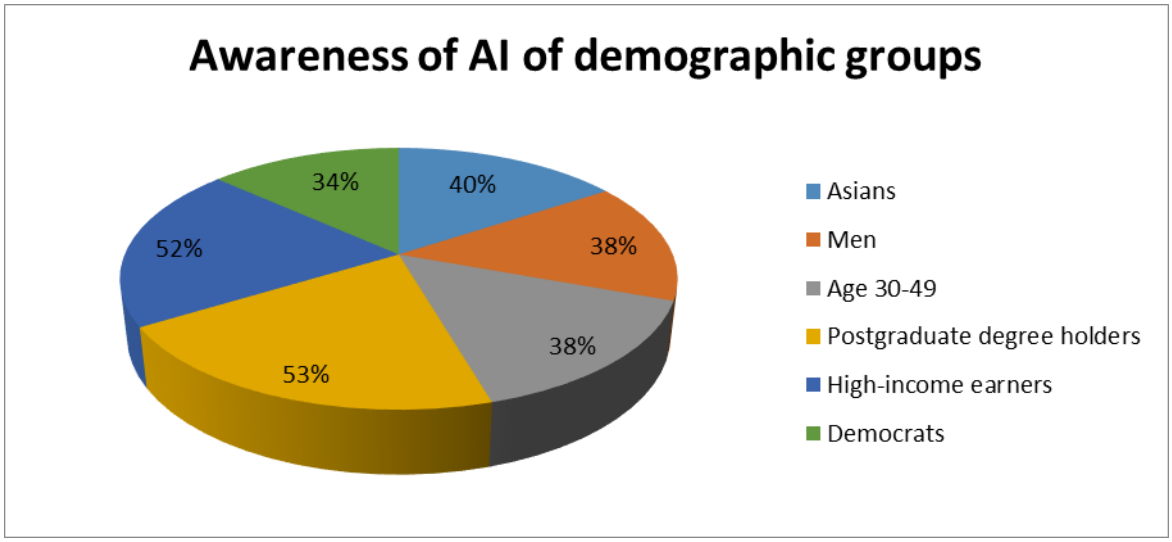
In addition to displacing certain jobs, AI is creating a surge in demand for specialized roles such as machine learning engineers, data scientists, and AI researchers. LinkedIn's 2020 Emerging Jobs Report highlights a 74% annual increase in job listings for AI specialists, signaling the growing need for expertise across sectors. The rise of these new roles highlights the importance of reskilling and upskilling the workforce to keep pace with technological advancements.

AI Impact on Job Market (2025)	Statistics
Jobs displaced by AI and automation	85 million
New roles created due to AI	97 million

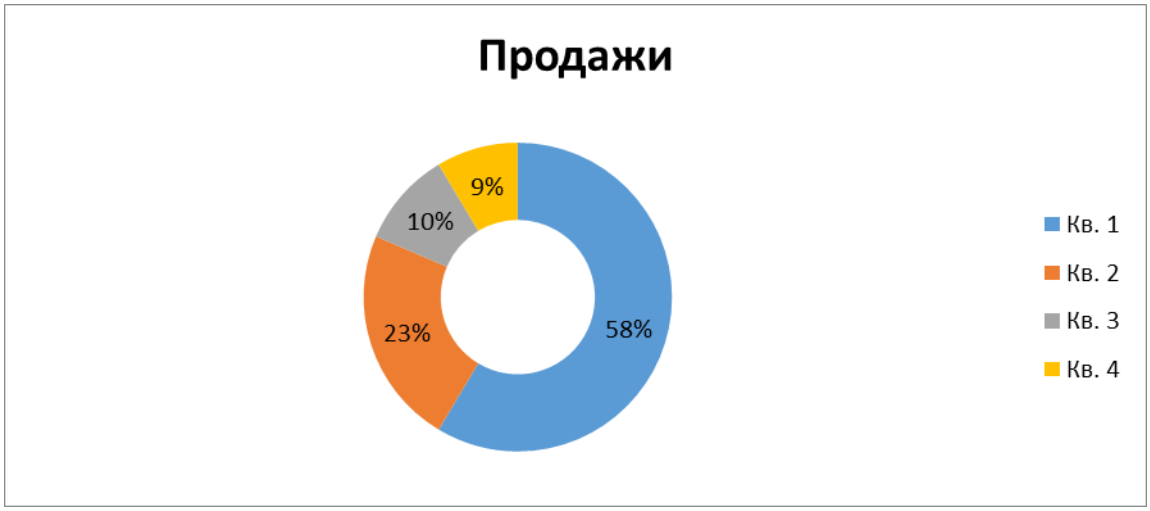
Annual increase in AI job listings	74% (LinkedIn 2020)
Fields with high AI adoption	Customer service, cybersecurity, digital marketing

Awareness Across Demographic Groups. Awareness of AI varies significantly across demographic lines. Groups most familiar with AI technology include:

These statistics reflect a concentration of AI awareness among more educated and financially advantaged segments of society, suggesting the need for broader outreach and education on AI technologies.



Common AI Applications in Business. AI applications are widespread in business sectors, with customer service, cybersecurity, and fraud management leading the way. According to Forbes, 56% of businesses use AI in customer service operations, while 51% rely on it for cybersecurity and fraud detection. AI is also significantly used in digital personal assistants (47%) and customer relationship management (46%), demonstrating its versatility across business functions.



Moreover, 83% of businesses consider AI integration a top strategic priority, reflecting the technology's growing influence in optimizing processes and driving business outcomes. However, the widespread adoption of AI has also prompted

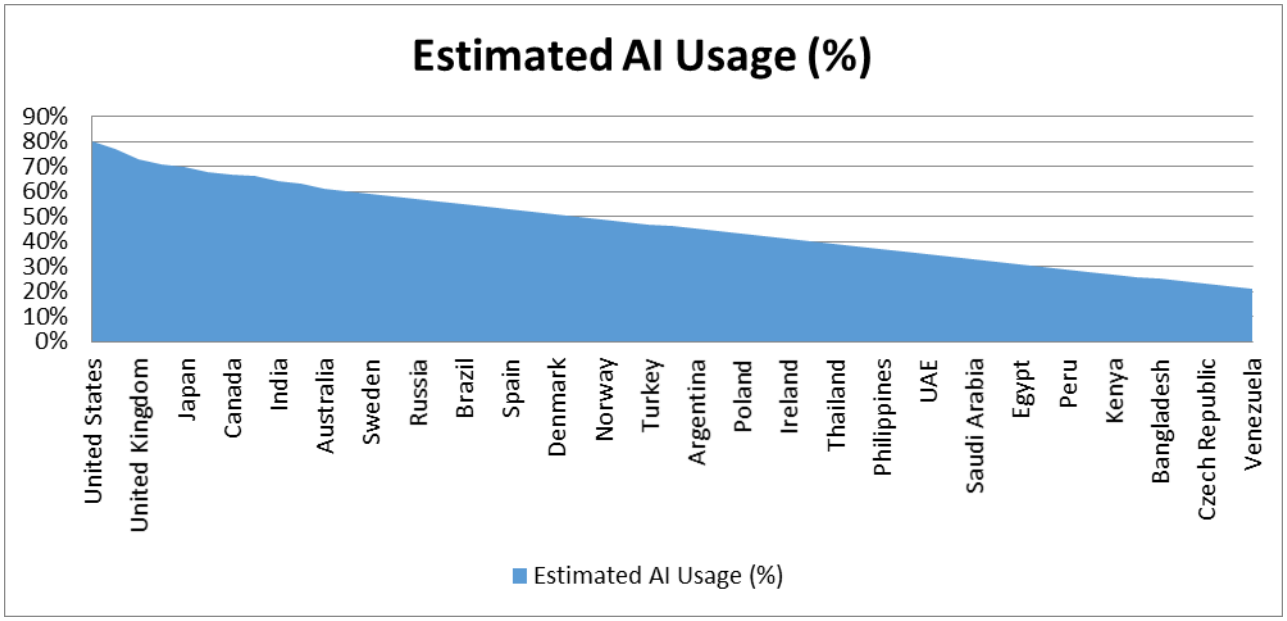
concerns about job displacement, with 52% of employed individuals expressing fears that AI could replace their jobs.

Economic Growth and AI's Role. The economic potential of AI is staggering. AI could contribute to a 25% increase in global economic growth by enhancing productivity and creating new markets. The manufacturing sector, in particular, is poised to see the greatest gains, with projections estimating a $3.8 trillion boost by 2035. Additionally, AI could improve labor productivity by 1.5 percentage points annually over the next decade.

Sector	**Projected AI-Driven Growth**
Global economy (by 2035)	25% higher growth with AI
Manufacturing sector (by 2035)	$3.8 trillion gain
Labor productivity growth (annually)	1.5 percentage points

AI's Impact on Education. AI’s integration into education is emerging as a critical factor for future workforce preparedness. However, many educators and institutions are lagging behind in AI adoption. Only 10% of educators believe that teaching AI should be a top priority for schools, though 33% recognize its importance. Alarmingly, 87% of educators have not received any formal training in AI as part of their professional development, underscoring a significant gap in the readiness of the education sector to integrate AI into learning environments.

At the same time, parents are divided over AI’s role in education. While 54% believe AI could positively affect their child’s education, 80% express concerns about the privacy and accuracy of AI-generated content.



The balance between AI and human work is shifting as automation and AI become more integrated into various industries. This division can be seen as a dynamic ratio that changes over time and across different sectors. Here's an overview of the current and projected distribution of tasks between AI and humans in various sectors globally:

AI vs. Human Work (Global Overview)

Year	Human Work (%)	AI/Automation Work (%)
2020	71%	29%
2022	65%	35%
2023	60%	40%
2025 (Projected)	54%	46%
2030 (Projected)	50%	50%

AI and Human Work by Sector (2023)

Sector	Human Work (%)	AI/Automation Work (%)
Manufacturing	55%	45%
Healthcare	75%	25%
Finance	65%	35%
Customer Service	50%	50%
Retail and E-commerce	60%	40%
Transportation and Logistics	45%	55%
IT and Software Development	70%	30%
Education	80%	20%
Agriculture	85%	15%

Manufacturing and Logistics: These sectors are seeing a greater shift toward AI and automation, with tasks such as assembly lines, predictive maintenance, and supply chain management becoming increasingly automated.

Healthcare: Although AI is making strides in diagnostics, data analysis, and robotic surgeries, human work still dominates in patient care and complex decision-making.

Finance: AI is widely used for fraud detection, algorithmic trading, and financial forecasting, but human professionals still play a crucial role in client relationships and strategic decision-making.

Customer Service: Automation through chatbots and AI-powered customer management tools is rapidly advancing, reducing the human workforce in repetitive tasks, though human intervention is needed for complex issues.

Education and Agriculture: These sectors are currently less impacted by AI, but the trend is expected to grow, especially in personalized education and precision farming technologies.

Future Outlook:

By 2030, many industries may see an almost equal split between tasks performed by AI and humans, with AI increasingly taking over repetitive and data-driven tasks, while humans focus on creative, strategic, and empathy-driven roles. However, some sectors like healthcare and education will still retain a higher percentage of human involvement due to the nuanced and interpersonal nature of the work.

AI is rapidly transforming the global economy, significantly impacting the workforce and industries. According to estimates, by 2030, AI is projected to contribute about $15.7 trillion to the global economy. However, this transformation brings a shift in the division of labor between humans and AI. The World Economic Forum estimates that while AI and automation could displace around 85 million jobs by 2025, it is expected to create 97 million new jobs, especially in sectors like data science, machine learning, and AI development.

Human work is increasingly being augmented by AI. For instance, in sectors such as customer service, AI is handling about 56% of interactions through chatbots and virtual assistants. In cybersecurity and fraud management, 51% of companies use AI systems. This increased AI participation is raising productivity, with AI projected to boost global labor productivity by 1.5 percentage points per year for the next decade.

Although AI is playing an increasingly larger role, the transition is uneven across different sectors and countries. In the IT and telecom industries, AI adoption is as high as 63%, while the automotive industry is seeing 44% adoption of AI technologies. The use of AI is expected to keep growing, especially in industries such as manufacturing, where it could deliver up to $3.8 trillion in value by 2035(

In summary, while AI is enhancing efficiency and creating new opportunities, it will require continuous reskilling and policy support to ensure that workers can adapt to the new landscape.

Here’s a table summarizing key findings from various literature on AI and promising jobs, covering opportunities, challenges, and necessary skills in the evolving job market:

Key Focus	Findings	Source
AI-Driven Job Creation	AI creates new roles in areas like data science, machine learning, AI development, and robotics. These roles are	McKinsey Global Institute (2017)

	critical for implementing and maintaining AI systems.	
Growing Demand for AI Specialists	Job openings for AI professionals have increased by 74% annually, with high demand for AI specialists, data scientists, and machine learning engineers.	World Economic Forum (2020)
Cybersecurity and AI	The rise of AI and digital platforms has increased demand for cybersecurity experts to protect data and systems from cyber-attacks.	Brynjolfsson & McAfee (2014)
AI in Digital Marketing	AI helps enhance digital marketing strategies through automation, personalized content, and data analytics, increasing demand for digital marketing experts.	Deloitte (2020)
Ethical AI Frameworks	As AI expands, there's a growing need for professionals to develop ethical frameworks to manage bias, fairness, and data privacy.	Bostrom (2014)
Sustainability Roles	AI-driven industries are focusing on reducing environmental impact, driving demand for sustainability managers who can integrate AI solutions into eco-friendly business practices.	OECD (2019)
Job Displacement	While AI creates new roles, it also displaces routine, manual jobs, especially in manufacturing and clerical sectors. Governments need to support reskilling efforts.	McKinsey Global Institute (2017)
Reskilling and Upskilling	54% of workers will need reskilling by 2022 to meet the demands of AI-driven job roles. Education and training in AI-related skills are essential for future job readiness.	World Economic Forum (2020)
AI in Healthcare and Finance	AI is transforming sectors like healthcare and finance by improving diagnostics, fraud detection, and decision-making, creating demand for AI professionals in these fields.	Susskind (2020)

This table captures the core findings of various studies on how AI is shaping the job market, with new opportunities emerging alongside challenges like job displacement and the need for reskilling.

CONCLUSION

In conclusion, the intersection of digital economics and artificial intelligence is fundamentally transforming industries and creating a dynamic shift in the job market. As AI continues to advance, it not only enhances business efficiency and drives economic growth but also necessitates the development of new skills and specialized roles. The demand for expertise in AI, data science, cybersecurity, and related fields is on the rise, offering promising job opportunities for those equipped with the right knowledge and adaptability. However, this technological shift also underscores the need for continuous learning and reskilling to ensure that the workforce can keep pace with innovation. Policymakers and businesses must collaborate to foster an

environment that supports skill development and addresses the challenges of AI-driven labor market changes. Ultimately, understanding the connection between digital economics, AI, and promising jobs will be key to unlocking the full potential of this technological revolution, ensuring that the workforce is prepared for the future of work.

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