Experts in the factoring market expect that the most successful commercial banks and factoring companies will be those whose activities are directly linked to process digitalization, including the implementation of artificial intelligence (AI) and the automation of customer service. At the same time, special attention will be paid to expanding geographical coverage and adapting factoring to meet the needs of regional clients. It is also important not to forget the need to comprehensively develop and raise entrepreneurs' awareness of factoring services, which remains low. Meanwhile, financial and credit institutions recognize the need to improve their employees' qualifications to implement and scale up these services.

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INTEGRATION OF THE ARTIFICIAL INTELLIGENCE IN THE UNIFIED BILLING SYSTEM FOR ENHANCING ONLINE PAYMENTS IN DIGITAL GOVERNMENT SERVICES IN UZBEKISTAN

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Research Problem: the Unified Billing System (UBS) in Uzbekistan now processes payments for hundreds of online public services, but it lacks the advanced analytics and automation needed to handle rapidly growing transaction volumes. In practice, the UBS is *"tracking state duties and service fees,"* integrating around 595 services by 2025, yet there is limited real-time monitoring or predictive insights. Consequently, the payment platform faces challenges in fraud detection, transaction monitoring, and data-driven decision-making. This thesis addresses the problem of how to integrate artificial intelligence (AI) into the UBS to improve the efficiency, security, and analytical capabilities of online payments in Uzbekistan's digital government.

Research Gap: despite the acceleration of Uzbekistan's digital government where more than 800 services are now available online and more than 12.5 million citizens use the national portal, there is little published research on applying AI specifically to public-sector payment systems. Existing studies mostly focus on e-government service delivery and infrastructure, but do not examine AI-driven optimization of a billing platform. In Uzbekistan's case, national technology reports note that "a unified billing system simplifies payments and transactions" yet have not detailed how AI could enhance this system. Thus, there is a clear gap in understanding which AI methods can be used to optimize transaction processing and financial analytics within the UBS in Uzbekistan.

Uzbekistan's digital transformation has centralized public-service payments. The Unified Billing System, developed under the Digital Government Project Management Center, automates payment acceptance, accounting, and inter-agency

transfers. It links the e-services portal with banks, payment operators, and mobile money platforms. By enforcing unified payment standards, the UBS has improved transparency and reduced bureaucracy. For example, integrating about 595 services into the Unified Billing System streamlined payment processing.

However, as transactions grow, the portal identified 39.4 million services delivered in the first nine months of 2025, limitations have emerged. The current UBS primarily handles point transactions but lacks intelligent monitoring. It cannot easily flag suspicious payments or analyze trends without manual effort. This means potential fraud and inefficiencies may go undetected until after this fact. Moreover, decision-makers have limited predictive information; they cannot forecast service demand or revenue flows from raw payment data.

Artificial intelligence offers tools to address these challenges by enabling intelligent information systems. For example, machine learning models can analyze historical transaction data to detect fraud in real time. Unusual patterns in payment amounts or frequencies can trigger alerts within the UBS's transaction-monitoring module. This enhances cybersecurity and financial transparency which are important for trust in e-government. AI can also provide predictive analytics allowing algorithms to forecast how many service applications (and thus payments) to expect in coming months, helping budget planning.

In practice, Uzbekistan is already deploying AI in its e-government infrastructure. The national IT integrator (Uzinfocom) has developed AI solutions "integrated directly into the electronic government system". Notably, an AI-powered virtual assistant ("Mukhlisa") can automatically execute user service requests, showing how AI can streamline user interactions. Similarly, AI can be applied to the UBS's reporting module. By using techniques like time-series forecasting and anomaly detection, the system can generate insights on payment trends and revenue (data that currently requires manual analysis).

Practical recommendations: based on the analysis conducted in this research, several scientific solutions and practical recommendations can be proposed for improving the efficiency of the Unified Billing System through the integration of artificial intelligence technologies.

Firstly, implementing AI-based transaction monitoring systems to detect suspicious financial activities and prevent fraud in real time. Secondly, integrating predictive analytics tools within the reporting module to forecast service demand and optimize government financial planning. Thirdly, developing intelligent user support systems, such as AI-powered chatbots and virtual assistants, to improve the accessibility and quality of digital public services. Thirdly, strengthening cybersecurity mechanisms using AI-based risk assessment and automated security monitoring systems. Lastly, a continuous modernization of the digital payment infrastructure to ensure the effective processing of increasing transaction volumes within the digital government ecosystem.

In conclusion, the integration of artificial intelligence technologies into the Unified Billing System represents a crucial step toward the development of an intelligent digital government infrastructure. AI-based solutions enable more efficient monitoring of financial transactions, improve fraud detection mechanisms, enhance analytical capabilities, and support evidence-based decision-making in public administration. As a result, the implementation of artificial intelligence can significantly increase the

efficiency, transparency, and reliability of online payment systems for digital public services in Uzbekistan.

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ВЛИЯНИЕ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА НА ФИНАНСОВЫЕ ТЕХНОЛОГИИ И КРАУДФАНДИНГ: ВОЗМОЖНОСТИ, РИСКИ И ПЕРСПЕКТИВЫ

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Цифровизация финансового сектора и развитие альтернативных механизмов финансирования представляют значимую тенденцию современной экономики. В этих условиях технологии искусственного интеллекта открывают новые возможности для оптимизации процессов, позволяя автоматизировать