new ones that lead to the creation of healthy competition, protection of private property, attraction of investments and other positive conditions for economic development.

Taking into account the above, we can conclude that the planned processes will intensify, and on their basis the positions of individual national economies as elements of the general global economic system will change.

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AI AND ML IN FINANCIAL CRIME PREVENTION

The purpose of this paper is to study AI and ML usage in financial security.

Financial crimes—fraud, money laundering, cyberattacks, and sanctions evasion—are growing in scale and sophistication, costing the global economy billions annually. Traditional rule-based detection systems struggle to keep pace with evolving threats, often generating false positives or missing complex schemes. Artificial intelligence (AI) is transforming the fight against financial crime by enabling real-time transaction monitoring, advanced anomaly detection, and predictive risk assessment. By leveraging machine learning, and network analysis, AI can uncover hidden patterns, adapt to new criminal tactics, and significantly reduce manual workloads in compliance teams. As regulatory pressures intensify, financial institutions are increasingly turning to AI-driven solutions to enhance accuracy, efficiency, and scalability in safeguarding the integrity of the financial system.

At the heart of AI fraud prevention, there is big data—and a combination of technologies that are only getting better as AI matures. First, there's data mining. It isn't the newest digital tool, but AI makes it more effective with each passing month. How it works: A computer system amasses a huge data set of consumer behavior (and fraudulent activity). When a transaction falls outside the pattern, the system flags it for review.

Scammers use robotic, synthetic voices to impersonate banks and steal customer data. Since these fraudulent calls happen outside company's systems, the best defense is giving customers a way to recognize company's voice.

The solution is a custom-branded AI voice—exclusive to your institution, with lifelike neural TTS. When customers hear distinct, natural-sounding voice, they'll instantly know it's safe and won't fall for such a deceive.

Voice authentication is a new form of biometrics that can prevent identity theft in voice-based interactions between banks and consumers. Voice biometrics uses AI to identify a speaker's voice as belonging to them and only them.

Biometrics are already used for verification in a lot of fintech apps (fingerprints, face ID). But voice biometrics may be even more secure, with more than 100 unique identifiers contained within the human voice.[1]

Examples related to investigations and enforcement using AI and machine learning technology include: detecting fraud in accounting and financial reporting based on anomalous patterns in some 200 metrics tracked by the SEC's Corporate Issuer Risk Assessment (CIRA) dashboard; targeting trading-based misconduct, such as insider trading, using the Abnormal Trading and Link Analysis System (ATLAS). While FINRA's and SEC's primary focus has been on market surveillance, the underlying advances in data analytics, AI, and machine learning can be used by financial institutions for regulatory compliance and continuous monitoring of financial advisors.[2]

A key technological initiative of the MAU's A&D Center is ARTEMIS, the Advanced Relational Trading Enforcement Metrics Investigation System. According to the SEC, ARTEMIS focuses "on the analysis of suspicious trading patterns and relationships among multiple traders." The SEC has stated that "ARTEMIS combines about 10 billion equity and options trade records from SEC and FINRA and uses advanced analytics, to rank trades bases on different metrics." The Enforcement staff can use ARTEMIS not only to identify new suspicious trades but also to find "previously undetected traders who might be involved in an existing investigation." [3]

The integration of AI and machine learning (ML) into financial crime prevention is reshaping the global economy by reducing fraud losses, enhancing regulatory compliance, and fostering trust in financial systems. As financial crimes grow in complexity, traditional detection methods prove inadequate, leading to billions in annual losses and increased operational costs for institutions. AI-driven solutions help us to mitigate these risks.

By minimizing false positives and uncovering sophisticated schemes, AI not only lowers compliance costs but also protects consumer assets, ensuring smoother financial operations. Looking ahead, widespread AI adoption in anti-financial crime efforts will strengthen economic stability, reduce systemic risks, and strengthen investor confidence. However, challenges such as data privacy concerns, algorithmic bias, and regulatory adaptation must be addressed to fully realize AI's potential. As financial institutions and regulators continue to innovate, AI will play a pivotal role in safeguarding the global economy against ever-evolving financial threats.

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DIGITALIZATION OF THE ECONOMY AS A KEY FACTOR IN ENHANCING THE COMPETITIVENESS OF THE REPUBLIC OF BELARUS AMID GLOBAL ECONOMIC CHANGES

In an era of rapid technological advancement and global economic transformations, digitalization has become a cornerstone of national competitiveness. Integrating digital technologies into economic processes boosts productivity, fosters innovation, and streamlines operations. For the Republic of Belarus, embracing digitalization presents both opportunities and challenges in maintaining and enhancing its economic standing amid intensifying global competition.

Digitalization serves as a pivotal driver of economic modernization, promoting innovation, enhancing efficiency, and facilitating the integration of national economies into the global digital landscape. For Belarus, the adoption of digital technologies has significantly elevated productivity across various sectors, thereby improving the country's competitiveness on the world stage. Studies have shown that the level of digital economy development closely correlates with competitiveness, easing access to global markets and resources. As noted by Emerging Europe, "Belarus was being hailed as a burgeoning tech hub in Eastern Europe, with its IT sector positioning itself as a regional success story." [1].

Belarus has demonstrated a commitment to digital transformation through initiatives like the establishment of the High-Tech Park (HTP) and the implementation of Decree No. 8 "On the Development of the Digital Economy." These efforts have spurred growth in the information and communication technology (ICT) sector, attracted foreign investments, and promoted IT exports. The HTP, operating under a favorable legal regime, has become a hub for numerous IT companies, contributing significantly to the national economy. However, recent challenges, including political instability and economic sanctions, have adversely affected the sector's stability and growth. The Belarusian Information and Communications Technology (ICT) sector experienced significant growth until 2022 but since then a number of political and economic factors have resulted in shortages and a subsequent crisis in the industry [2].

The integration of digital technologies has positively influenced various sectors of the Belarusian economy: