

Eugene Goryunov, David McCombs, Dina Blikshteyn, Nicolette Nunez in *The Patent Lawyer: 'Are Artificial Intelligence Technologies a Game Changer for Patents in Finance?'*

June 27, 2022 David McCombs, Dina Blikshteyn

PRACTICES AI and Deep Learning, Data Centers and Digital Infrastructure, Patents, Intellectual Property

[David McCombs](#), Eugene Goryunov, [Dina Blikshteyn](#) and Nicolette Nunez of Haynes Boone evaluate the progression of AI in the finance space and express key reasons to patent these new technologies.

A new wave of patentable subject matter has arrived - artificial intelligence (AI) based inventions - and the financial sector should be paying attention. AI technologies are defined by the U.S. National Institute of Standards and Technology (NIST), as systems comprising “software and/or hardware that can learn to solve complex problems, make predictions or undertake tasks that require human-like sensing (such as vision, speech, and touch), perception, cognition, planning, learning, communication, or physical action.” The financial sector is using and investing in AI technologies to improve operation, efficiency, and security. J.P. Morgan Chase, for example, opened an AI lab to fully capitalize on AI. Applications of AI and machine learning technologies range from chatbot assistants to fraud detection and security to actual asset management. Some recent applications of these financial AI-based technologies include:

Chatbots – Many banks have invested in AI chatbots. AI chatbots provide 24/7 customer interactions and personalized banking management. Advances in natural language processing made AI chatbots appear more human and emulate human conversation. Bank of America, for example, debuted the chatbot “Erica” in 2018, who serves over 10 million Bank of America customers and has quite an English language understanding for a machine.

Cybersecurity and Fraud Detection – J.P. Morgan Chase uses AI based fraud detecting applications to detect fraud patterns. Details of credit card transactions are sent to data centers and are processed by AI. The AI decides whether the transactions are fraudulent, often in real-time. As a result, “Chase’s high scores in both

Security and Reliability—largely bolstered by its use of AI.” Goldman Sachs uses anomaly detection and machine learning to identify anomalous patterns and combat cyber-attacks. These AI technologies prevent security breaches that expose customer data and prevent payment fraud.

Trading - Kensho, which operates an AI lab on Harvard’s campus creates AI-based trading technologies. AI trading technologies analyze data patterns in real time and capture trading opportunities and stock pricing forecasts that may not be captured by traditional statistical models. These technologies are used by some of the world’s leading financial institutions, including Goldman Sachs, Bank of America, Merrill Lynch and J.P. Morgan Chase.

Account Opening - J.P. Morgan Chase and Blackrock use AI technologies to automate account opening for securities financial services. These AI technologies use natural language processing techniques to digitize existing and cumbersome paper processed required to open financial accounts.

Asset Management - AI also has the potential to efficiently improve operational workflow “by reducing back-office costs of investment managers, automating reconciliations and increasing the speed of operations, ultimately reducing friction (direct and indirect transaction costs) and enhancing overall performance by reducing noise (irrelevant features and information) in decision-making.”

Excerpted from *The Patent Lawyer*. To read the full article, [click here](#).