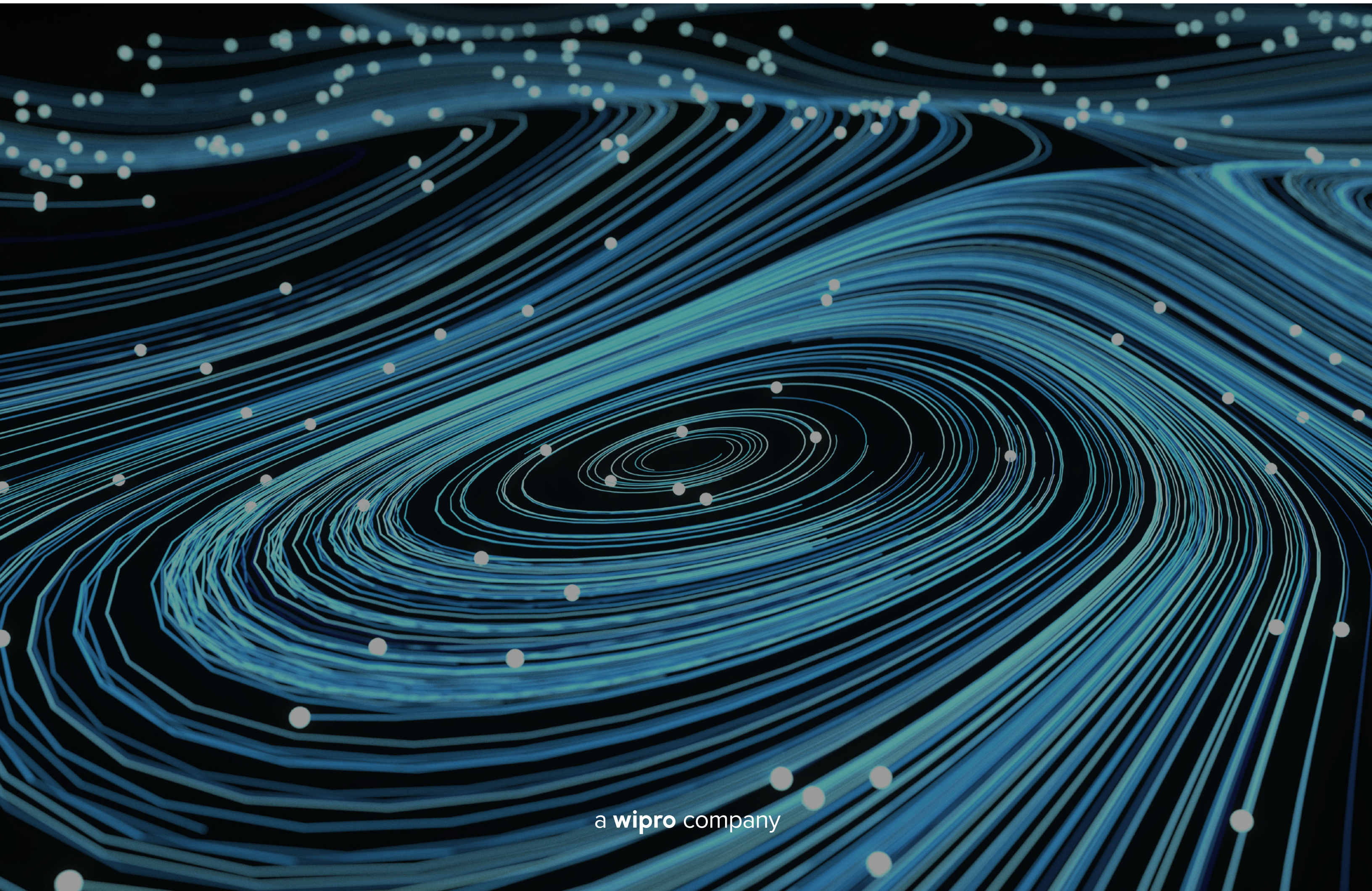
CAPCO

UNLOCKING NEW OPPORTUNITIES:

THE INTEGRATION OF ARTIFICIAL INTELLIGENCE/ MACHINE LEARNING TO LENDING



BACKGROUND

Artificial intelligence and machine learning (AI/ML) is smart, fast, and adaptive by design. As banks look toward adopting technology to streamline their processes and products, AI/ML has been a recurring topic and proven to be a major pillar to advancements and digitization efforts. This trend is fueling incredible growth in the AI/ML industry. In an analysis by Statista, it is forecasted that the AI/ML industry will quadruple, globally growing from a current $34 billion to $126 billion, by 2025.[1]

AI/ML technology shows promise to improve the lending customer experience by using predictive technology to anticipate needs and provide quicker service. It would also facilitate the engagement from the bank's perspective by streamlining the underwriting process and eliminating redundant, manual touchpoints.

ANALYZING CREDIT WORTHINESS

AI/ML can analyze millions of data points in seconds to help paint a more holistic picture of clients and their credit history, by reading several different sources to determine credit worthiness, such as utility payments, online shopping data, education, etc. The days of single source assessment with traditional credit bureaus could be coming to an end with AI/ML technology as some fintechs develop AI that can scan numerous documents to educate lending decisions, as in the case of Ocrolus,[2] a rising fintech. According to the Brookings Institute, even data surrounding social media presence, time of loan request, and clothes buying activity can be used to help develop an algorithm to help lenders make informed credit decisions; however, using such extensive and rich data is only possible and effective through AI.[3] Alternatively, these data points would have to be consumed manually, which could give way to human error, rework, and lengthier processing times.

> "*AI/ML has proven to be a powerful tool in financial services. In the lending space, the technology allows lenders to quickly and more accurately analyze credit profiles of potential borrowers to expedite educated credit decisions, predict consumer behavior, and more fairly distribute loans quickly as the industry continues to rapidly evolve.*"

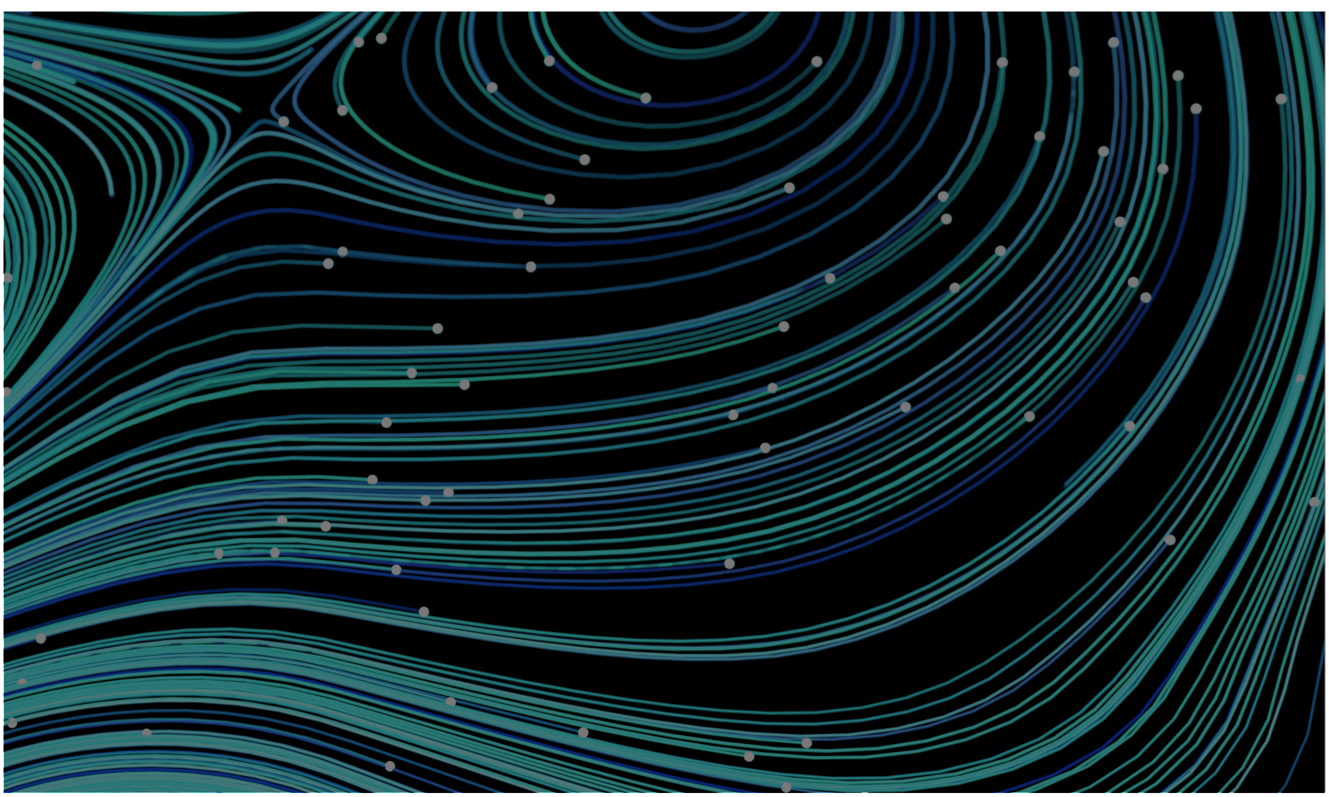
Using alternative systems to determine credit worthiness also makes lending more accessible to borrowers who would not typically be approved for loans by traditional banks due to limited credit history or other special financial circumstances. Giving underserved demographics an opportunity to get loans increases the potential for higher yields for the lender.

- ***Removing historical biases*** – A purely data-driven technology, AI can help remove historical biases in the lending industry that have previously excluded customers from receiving loan approval based on extraneous factors, such as demographics. In creating a model that checks for these biases, the AI can focus exclusively on the relevant data points for loans. Not only could AI help identify biases in the lending process, it could also help check and correct skewed patterns in existing crediting AI systems. In one example, a lender had discovered that, on average, women would need to earn 30% more than men to be approved for a loan of the same amount. Given this information, they retroactively balanced the data used to move the proportion of loans made to women to be closer to that made to men. This adjusted the algorithm to more fairly distribute loans.[4]

- ***KYC*** – KYC is a notoriously cumbersome part of the lending process, but one that is absolutely necessary not just by regulatory requirements, but also ensure sound credit decisions. AI is a useful tool in resolving some of the pain points associated with KYC, such as verifying borrower identities, assessing borrower history, reviewing and scanning documents, and even detecting falsified documents. It can essentially automate the KYC process, thus leading to quicker loan responses, more informed credit decisions, and reduced fraudulent activities.

- ***Predicting Loan Repayment*** – AI can use predictive models to score customer propensity to repay loans by leveraging hundreds of predictive variables, both customer data and macro data – E.g., payment history, credit score, employment sector, unemployment rate, local inventory, mortgage rates. AI can also send borrowers a no-pressure analysis of whether they can pay faster to save interest and fees and help customers repay and banks collect.
  - Advanced analytics and machine learning can classify customers into microsegments for more targeted intervention

  - Machine learning can analyze strategies for increasing collections (targeted and personalized response programs). For example, audio analytics have become an important tool for understanding front-line effectiveness – using algorithms to work through thousands of conversations to allow banks to discover the most productive/engaging approaches



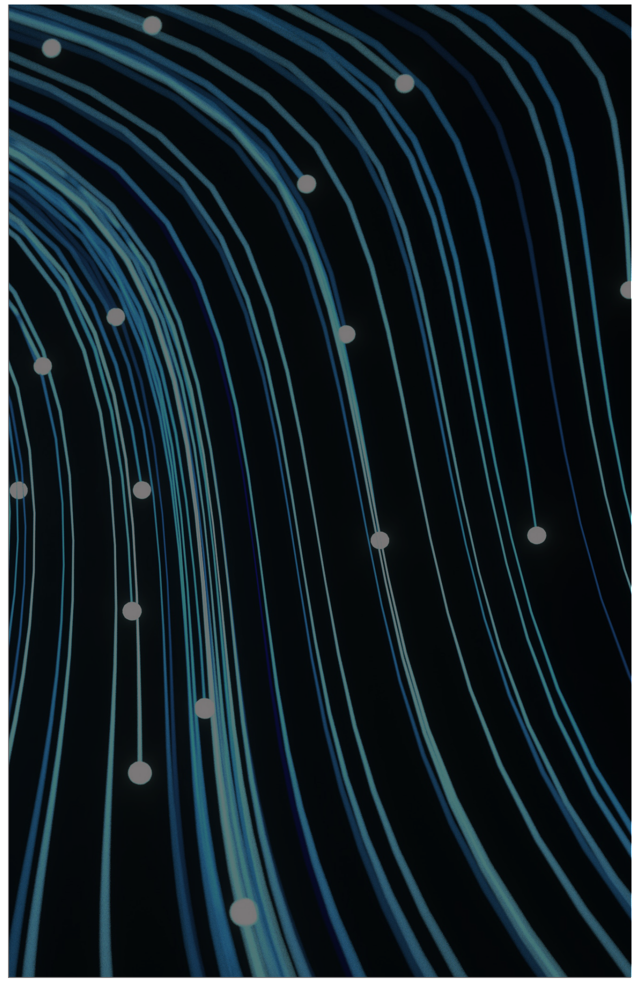
CURRENT LANDSCAPE

For the most part, there has been limited regulation on AI/ML, however the technology has not fully missed the eye of regulators. In 2018, FINRA created a report on AI and predicted more regulation on the technology is bound to emerge and disrupt its untethered growth thus far.[5]

Some rising players in the AI/ML industry are DataRobot, ZestFinance, Scienaptic Systems, Underwrite.AI.

- Using these technologies have helped lenders make smarter underwriting decisions and realize significant benefits by cutting losses. For example, auto lenders using machine-learning have been able to predict risk more accurately and reduce losses by more than 25%, according to Zest AI.[6]

AI/ML is challenging how folks look at everyday processes and already acting as a disruptive new technology in financial services; however, it is also unlocking new opportunities for financial institutions to improve and modernize their processes in alignment with the demands of the digital age.



Capco's unique entrepreneurial spirit encourages our team to stay ahead of the trends emerging in AI/ML to continue providing clients with state-of-the-art technology and solutions to transform their businesses. With expertise across a number of domains, Capco can work with technologists to create the ideal AI/ML solution for our client in many areas – Lending, Credit Decisioning, Financial Crimes, Operations and Risk management.

If you have any questions and interested in discussing AI/ML solutions for your bank,
contact balaji.ramamurthy@capco.com OR james.kane@capco.com.

SOURCES

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Capco, a Wipro company, is a global technology and management consultancy specializing in driving digital transformation in the financial services industry. With a growing client portfolio comprising of over 100 global organizations, Capco operates at the intersection of business and technology by combining innovative thinking with unrivalled industry knowledge to deliver end-to-end data-driven solutions and fast-track digital initiatives for banking and payments, capital markets, wealth and asset management, insurance, and the energy sector. Capco's cutting-edge ingenuity is brought to life through its Innovation Labs and award-winning Be Yourself At Work culture and diverse talent.

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