



FUELLING THE FUTURE OF FINTECH WITH **DATA** **SCIENCE & AI**

Overview

How Data Science drives Fintech

- Analysis of Customer Payment and Transactions
- Credit Risk Evaluation
- Revenue and Debt Collection
- Customer Journey Attribution
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- Portfolio Optimization and Asset Management
- Corporate Compliance & Service Quality

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Foreword

Data science is the study of data for analytical insights, providing the means for predicting outcomes and consequently, a company can derive prescriptive steps for optimising their business prospects. Data is much vaunted as the new oil, however every profit driven enterprise out there sits on copious of big data as they clock years through the following enterprise processes which can be split into the two types mentioned here:

Core Processes

- Sales
- Customer service
- Finance department
- Operations
- Production

Support Types of Business Processes:

- Accounting process
- Management process
- Human Resources

Fintech companies will most likely have these processes running day-to-day as well. However since there is a lot of novelty involved, and some of the processes are bleeding edge in relation to agile business operations, it goes without saying that AI is part of this agility.

This e-book will solely focus on how data science and Machine Learning would strongly boost sales and all allied process for a Fintech organisation.

The background image is a composite. In the foreground, a sleek, dark-colored sports car is shown from a high-angle, front-quarter perspective, driving on a road at night. The car's headlights and wheels are illuminated with a bright blue glow. The road surface is visible, showing lane markings and some text like 'VALUABLE' and 'LORD'. In the background, another car is visible, also with blue lighting. The overall scene is set against a dark, cloudy night sky. On the right side of the image, there is a large, white, sans-serif text overlay. Two thin red vertical lines are positioned on the right side, one above and one below the text.

How Data Science Drives Fintech

Analysis of Customer Payment and Transactions

When it comes to enhancing the product value for customers, prediction and analysis of transaction volumes prove to be the key. However, on a broader scale, fetching and analyzing data hardly bears the desired output.

This is where data science comes in as a medium to better classify payment records and allow banks to customize additional services, as per the specific need of favored clients. However, this may again vary from minimal (Total grocery spend in the last month) to advanced analytical features such as the integration of personal data and payment records to enable loyalty rewards, recommendations, and other measures of proactive engagement. Primarily, data science facilitates cryptic analysis of customer behavior across every engagement channel.



Credit Risk Evaluation

With their vision to make “credit accessible to the masses”, several FinTech startups are seamlessly into bootstrapping and gathering a wider client base. Their value proposition comes down to the “faster and precise evaluation of credit risk” process at traditional banks, allowing the financial institutions to reach out to client base spread over a wider area and minimize the default credit rates.

Interestingly, some organizations and brands consider up to 15,000 data points acquired from different sources to access the right information. Some of these credit points also revolve around how fast an applicant could fill out the credit application online. Such factors are eliminated with better and more accurate predictive power, improving the scope for the business case.



Revenue and Debt Collection

When it comes to data science, the application isn't only fixed to securing data around consumer behavior. Its applications also enable brands to utilize powerful predictive models, optimizing debt and revenue collection. Thanks to the advancement of AI, with real-time data analysis, you can already predict the possibility of a timely payment at the moment of purchase. This way, the process simplifies revenue collection, making it more transparent. At the same time, insights gathered from predictive modeling and behavioral economics can be implemented to ensure better success rates of debt collection post the due dates. However, it should be noted that curating an optimal strategy for approaching debtors is a delicate undertaking, no amount of analytics can help you with the true success of debt collection.



Customer Journey Attribution

Costs around customer acquisition and Customer Lifetime-Value are one of the most primary elements around almost every business model – key metrics for banks and financial service providers.

Thus, optimizing conversion rates and minimizing churn rates are the most crucial activities held within most financial organizations. Data science simplifies and allows a better understanding of numerous types of data, from social network activity, unstructured text, to direct feedback rankings. This way, the concept of data science enables efficient spotting of customers who are likely to quit the service or target and identify any client for upselling activities.

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Fraud Detection and Prevention

While this factor has been one of the most considered agenda, even before the rise of data science as a term, fraud detection and its prevention continue to be the top priorities for the FinTech executives.

Especially, the rise of eCommerce has raised the concerns around fraud detection allowing the early warnings to have evolved rapidly. Every aspect of such measure, when paired to data science, allows real-time assessment of motives of fraud on payments.



Portfolio Optimization and Asset Management

While asset management and portfolio optimization are among the more demanded side of data science's application, we also have some exciting new avenues on the rise. Impact analyses and their correlation with asset price developments are now executed seamlessly, allowing for better creativity and insight. Further, today it is possible to test and optimize capital allocation in real-time, saving costs on overhead expenses.



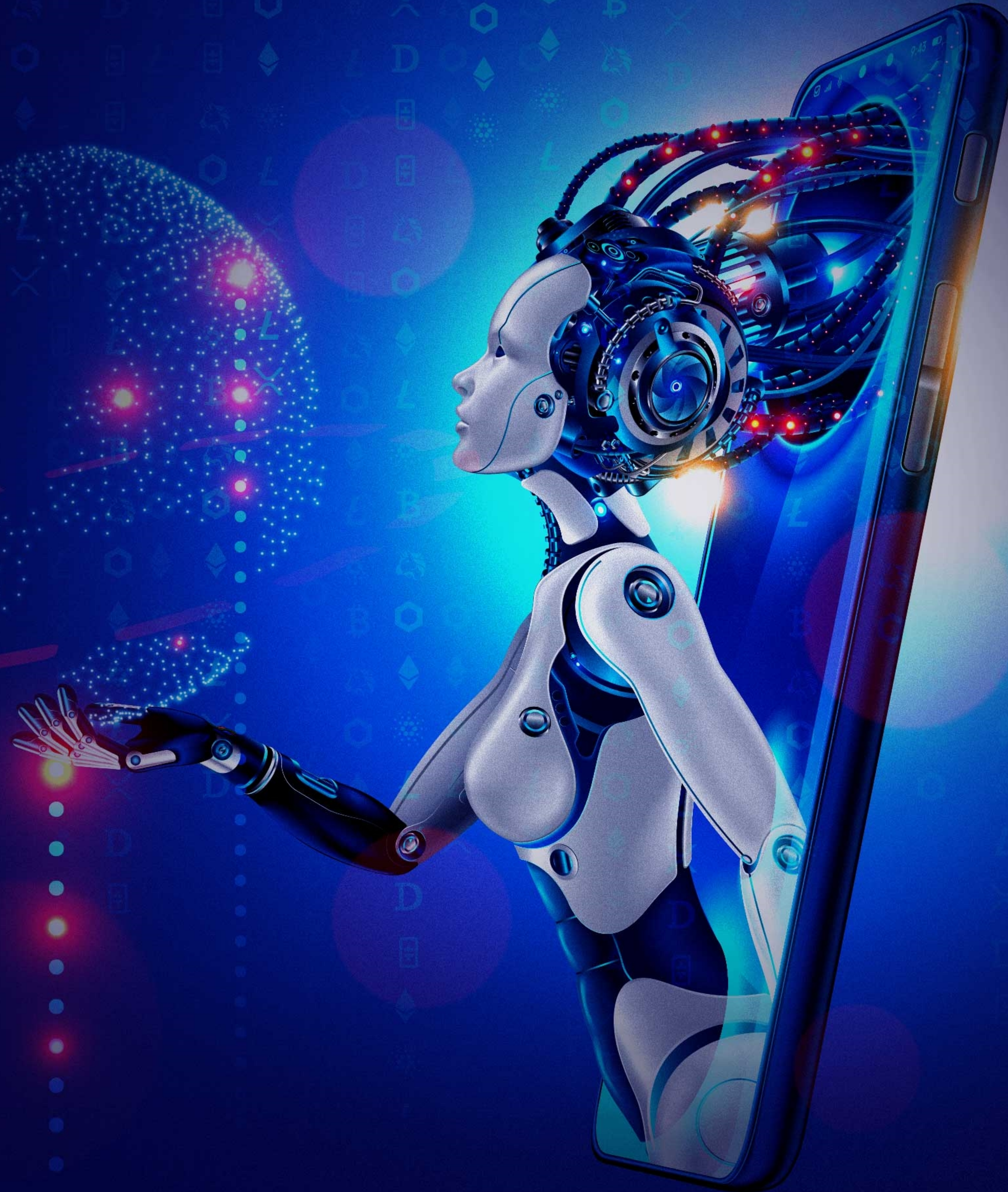


Corporate Compliance and Service Quality

Certainly not a factor on the innovative end but a factor still vital for larger institutions: The tracking and implementation mechanisms help develop a compliant behavior throughout the hierarchy of personals in an organization.

Here, the architecture and designing processes promote a better opportunity at early winning and allow early flagging and warnings for non-compliant behaviors around operations. Such factors are generally essential for firms and organizations listed in the stock market. However, corporate compliance further concerns organizations as the issue are associated with service quality.

AI In Fintech: Possible Applications



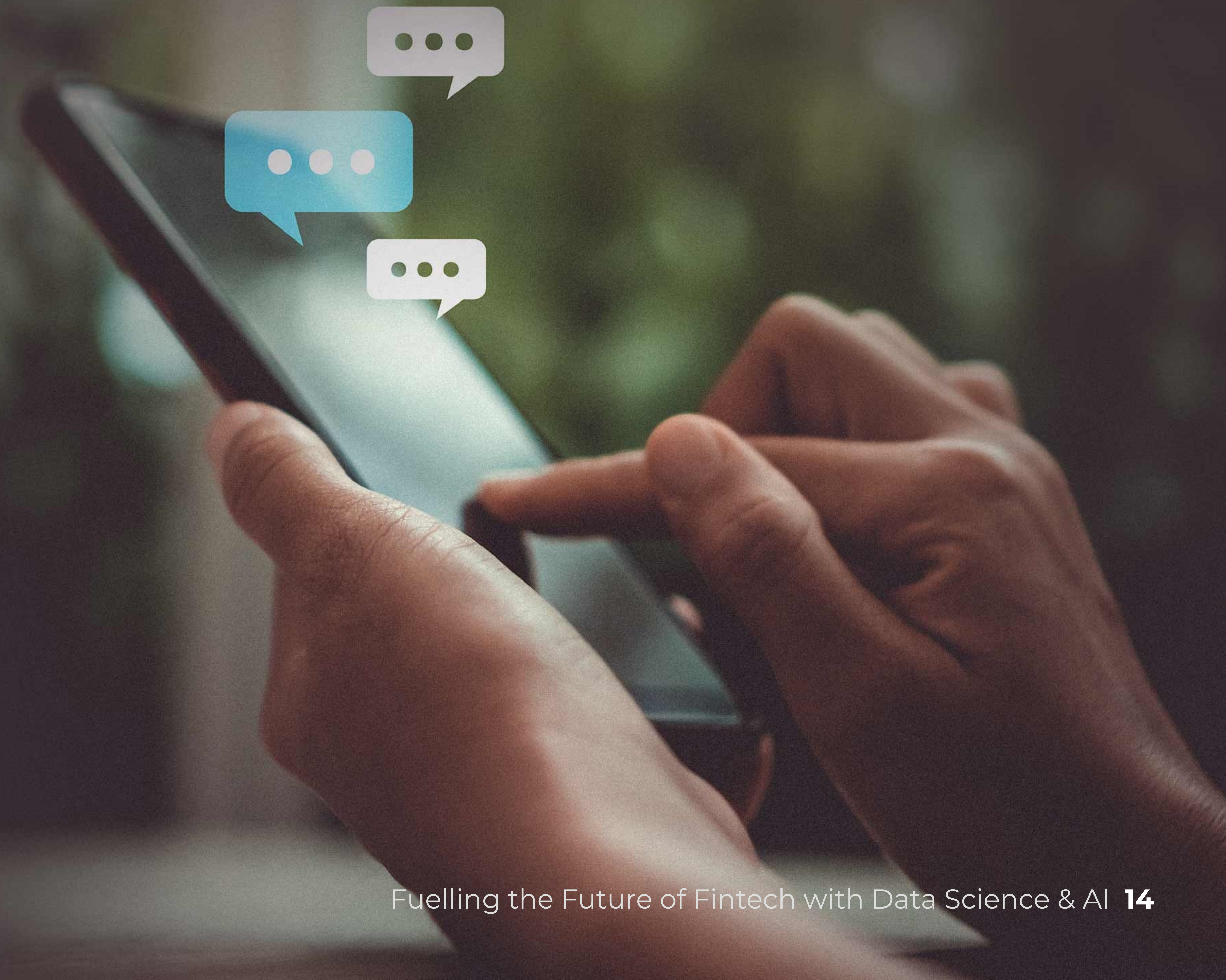
A close-up photograph of a hand holding a white chess king piece, poised to move it. Below it, a black chess king piece sits on a checkered chessboard. The background is dark, and the lighting highlights the textures of the chess pieces and the hand.

Ensuring Accuracy In Decision Making

Decision-making with data-driven insights is the novel and prevalent style of managing an organization. In these scenarios, bankings agents and insurance leaders strive to seek the right answers from machines instead of relying on the expertise of human experts. These machines then evaluate the available data and provide recommended results that help decision-makers drive better decision-making.

Automated Customer Support

Fintech businesses can now leverage automated finance chatbots, text chats, and even voice systems to deliver highly augmented customer service with expert advice at highly affordable prices. We will further discuss how chatbots and automation can help a fintech company in Chatbots as your Personal Finance Assistant.



Claim Management

The automated analytic tools carry out extensive analysis to gather evidence for a necessary conviction. Different advanced tools equipped with artificial intelligence then learn and monitor the behavior patterns of users to determine any warning or rare signs indicating fraud incidences or attempts. Further, one can leverage machine learning technology (ML) to facilitate better claims management with enhanced claim handling mechanisms.

Businesses also leverage artificial intelligence to handle massive amounts of data in a small period of time, enabling insurers to establish automated handling mechanisms. This can further hasten different claims, cut the overall processing time, reduce handling costs, and enhance customer experience. These algorithms are then used to determine patterns and weed out fraudulent claims in the process. These self-learning competencies combined with artificial intelligence can be used to adapt earlier undiscovered cases to carry out further detection and analysis over time.



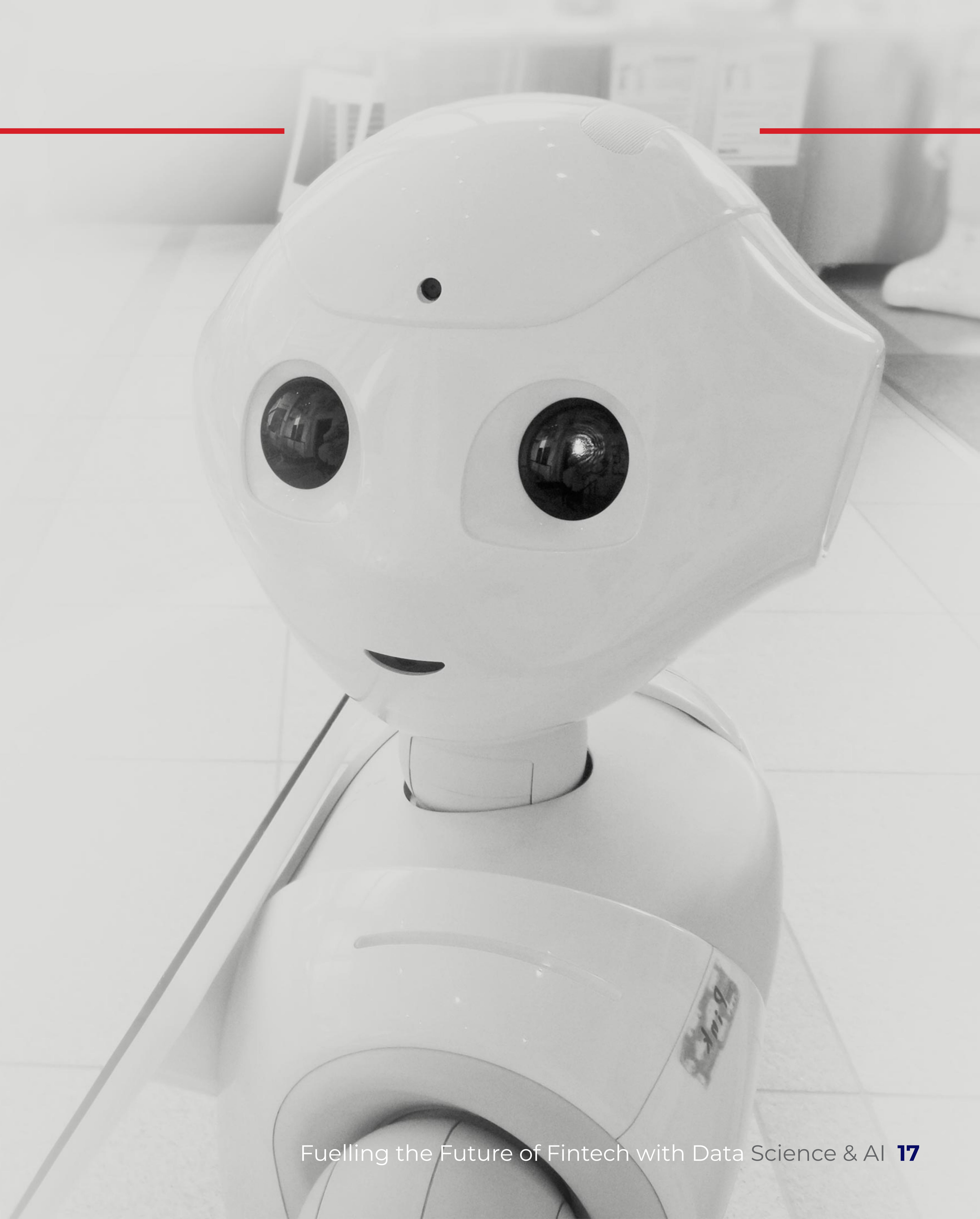
Insurance Management

When we blend artificial intelligence and insurance management can help an organization drive enhanced automation in different underlying processes and leverage rudimentary information for driving better decision making for customers. Further there automated agents can be used to help the users determine the insurance requirements with ease. In general, it is only when the damage has occurred that we are reminded of insurance.

Therefore, automating the underwriting processes can hasten processes and link different data sets relevant to the processes and external data that might not be available in the medical records to deliver expensive tests. Organizations can even leverage the data used before accessing the risks and lower the chances of damage occurring to the insurer and the insured.

Virtual Financial Assistant

One can make enhanced financial decisions by leveraging automated financial planners and assistants. This includes everything from monitoring different stocks and events along with the trends of bond prices in accordance with the personal portfolio and financial goals of the user. This can help one make better recommendations about the stocks and bonds that are to be sold or bought. Many even call these systems “Robo-Advisor” leveraged by many different fintech startups and companies for better augmentation.



Predictive Analysis in Financial Services

Leveraging predictive analytics for financial services can enhance all business strategies to generate more revenue by increasing sales and optimizing resources. This can also be used to enhance other internal processes, improve different business operations and leave the competitors behind. Organizations from different industries use predictive analytics to gather and augment data for better analysis.

This is made possible by using leading technologies and algorithms to deploy custom solutions that are specifically for different customers. For example, one can even prevent bad loans by using predictive analysis for calculating credit scores.

One can determine different patterns and predict insights from huge quantities of data by leveraging predictive analytics. These results can further predict future trends, such as what customers demand next or how long an employee might last. Therefore, predictive analytics include everything from data mining to advanced statistics. To learn more about predictive analytics, make sure to check out our previous blog titled [How can Machine Learning boost your predictive analytics?](#)





Wealth Management For Masses

Wealth management advisory, when paired with digital services helps reduce the net worth market around different segments, proving to be lower the fee based on commissions. This is where the smart wallets come to action, these intelligent AI-based wallets help monitor and analyze users' actions and behavior. This way, the platform instructs users to alter and restrain their limits around personal spending and savings.

Thanks to such significant potential around technology, paired with finance, the future might witness a significant increase in the Financial industry's automation. AI will no longer be an object of science fiction automation, Machine Learning, Artificial Intelligence, and bots when integrated into the core aspects of financial operations, will potentially expand skills, improve customer experience, and reduce costs.

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23+
Years

750+
Professionals

11k+
Projects

6m+
Hours

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indusnet.co.in | info@indusnet.co.in