

AI and Robotics in Financial Services

SEPTEMBER 2018 TECH BRIEF FOR FINANCIAL SERVICES TALENT NETWORK



Fintech Companies Leveraging New Technology

Artificial intelligence (AI) is defined as any technology used to mimic human intelligence. It is broken down into three different areas including: machine learning, natural language process and cognitive computing. Used to drive partner equipment known as robotics, AI will extend human reach, increasing efficiencies, improving performance and increasing profitability, even in financial services firms.

Venture Scanner, a technology analytics firm, estimates that at present there are 2,000+ AI start-ups across 70 countries that have raised a significant funding to build and study **intelligent robots**. AI-bots have a significant role to play in customer service applications, managing assets and safeguarding against theft.

There are five major areas in which AI and robotics are transforming fintech, including: investment, customer engagement, risk management, regulatory, and stock market predictions.

Labor Force Takeaway

As with all technologies, the need for robotics is anticipated to grow exponentially in the near term. **Robots** working at customer service banking telecenters, self-service terminals, kiosks and web portals will be in need of inventory, maintenance, management, and lifecycle updates/patches. Technology Advisory Network recommends the following certifications:

PC Age, as well as many local community colleges, offer **CompTIA A+, Network and Security certifications**, all aimed at the IT beginner. Certifications cover software installation, maintenance and update, network access, security, and other IT fundamentals. CompTIA A+ educates to the level needed to run a network of endpoints and devices in a back-office and fintech environments.

The **Cisco Certified Entry Network Technician** (CCENT) is the first step towards the CCNA (Certified Network Administrator) certification. It covers network fundamentals, basic security and wireless, routing, switching, and configuring, all key components of TLD platforms. CCENT is valued across industries.

Major **manufacturers** in the fintech AI/robotics space, including Hitachi and Adyen One, and software developers, Gappify and FloQuest, all have products with training modules that associates are trained on to support specific implementations at their place of employment.

Major Technology Disruptors in B2B FinTech

The following **major areas** in the financial services industry are estimated to be the most noticeably affected by the availability of artificial intelligence driven solutions:

Investment - Robo-advisors, automated investment services providing algorithm-based investment advice with minimal human intervention, are setting the investment community on its ear. Providing ubiquitous access to **investment advice** removes barriers (i.e. cost) for people previously unable or unwilling to seek such advice. By-products include increased regulatory compliance and decreased human error.

Artificial intelligence (AI) and digital labor cover a range of emerging technologies being used across the financial services industry, including robotic and intelligent process automation.

Customer Engagement - Robots are no stranger to customer service environments. Integrated Voice Response (IVR) systems are machines that customers can access by phone, and through a series of numerical prompts from a telephone key pad, route callers to recorded answers or provide data base access. IVR systems are currently enjoying widespread deployment in many industries, including finance. With the boost of artificial intelligence and machine learning, deeper dives into customer needs and product recommendations become possible, driving down provider costs and increasing customer access to services.

Risk Management - **Technology** can rapidly adapt to the thought processes of human analysts and is fully capable of anticipating fraud even before it happens. By anticipating threats and preventing card abuse through user profiling and account access tracing, artificial intelligence and “finbots” can stabilize and reinforce security. Improving client perception, reducing loss and replacement fees, and increasing service utilization and performance will benefit the overall fintech industry.

Regulatory - Artificial intelligence can learn, remember and reply to all regulatory laws, making compliance nearly automatic. With reduced need for human intervention, costs can be driven down and compliance improved throughout the banking and financial services industry.

Stock Market Predictions - **Big data analytics** is another tech phenomenon that is driving change across all sectors. Big Data can be harnessed through artificial intelligence to predict and set pricing in the stock market. Bond prices, including FNMA and others, have typically relied on human analysis and anecdotal speculation. By capturing **actual market based historical pricing**, improved returns on investment and profitable investment portfolios can be realized.

The financial sector is uniquely situated to take advantage of the technology revolution currently underway. The mountains of financial data that are available in historical and current pricing data, analyses, account records and user profiles, can all be collected, aggregated and interpreted by the artificial learning technologies available today. This information can be used to answer client requests, predict market performance and returns, and even assess and manage risk, which is essential to customer confidence and portfolio performance.