

# Data Science for Financial Services

## Top 4 Use Cases to Accelerate Innovation

### Overview

Navigating today's digital world as a financial services organization can be tricky. From financial modeling, to detecting risk and fraud, to performing customer and credit analytics, leveraging data to innovate has become table stakes to stay in the financial services game. The best way to do this is with data science and machine learning. Data science helps you extract knowledge from your data so you can make fact-based business decisions, all while protecting sensitive customer information.

Today, leading financial services companies are using data science to drive a number of innovative use cases. We've created this guide to help you identify areas where data science can take your financial business to the next level.



### Credit Analytics

Risk and compliance management including CRM, credit, risk, merchant records, products, services

- Enterprise DataHub
- Regulatory and Compliance Analysis
- Credit Risk Management
- Automated Credit Analytics

**Outcome: Predictive analytics transforms growth**



### Risk and Fraud, Threat Detection

Risk and revenue management transaction data, demographics, purchasing history, trends

- Real-Time Anomaly Detection
- Card Monitoring and Fraud Detection
- Security Threat Identification
- Risk Aggregation

**Outcome: Customer experience with machine learning**



### Marketing Analytics

Recommendations engine including clickstream data, products, services, customer data service

- Recommendation Engine
- Predictive Analytics and Targeted Advertising
- Fast Marketing and Multi-Channel Engagement
- Customer Sentiment Analysis

**Outcome: Improved customer engagement with machine learning**



### Customer Analytics

Effective customer engagement including customer profiles, credit history, transactional data, LTV, loyalty

- Customer 360
- Customer Segmentation
- Reduce Customer Churn
- Underwriting, Servicing
- Delinquency Handling
- Insights for New Products

**Outcome: Faster innovation for customer experience**

### What is Data Science?

Data science is a combination of various tools, algorithms, formulas, and machine learning principles used to draw hidden patterns from raw data. Unlike rear-view reporting, data science reveals the why behind your data—not the how. Data science helps you:

- Find the best customers, charge the right price
- Allocate costs accurately
- Make data a key element of strategy
- Minimize work in progress and inventory
- Maximize innovation

### Extract knowledge from data in any form

Data science initiatives can deliver significant value to enterprises when the right opportunities are identified, the business enables using data to make decisions, and new talents and technology are explored.