

AI, Machine Learning & Big Data For Banks & Financial Institutions

Duration: 2 Days

Description

With the promises of Big Data and AI, human intelligence and expertise have remained essential to creating value from data. Early big data initiatives in financial services often failed because they didn't define their critical success factors in the context of their existing business. Which of your current successes would be further enhanced with data? Can data be sourced across business functions? Do you have the right talents in-house? Are the right outcomes being measured?

Devising and executing on a winning data strategy is thus as much about the data initiatives your business can support as the technology which would enable them. This workshop introduces participants to the Big Data Canvas, a methodology for ensuring that data strategies remain feasible while pursuing the most valuable outcomes.

Delegates will learn how to

- Recognise the dynamics of big data, analytics and data science in various financial applications
- Identify the Critical Success Factors for an organisation's Big Data strategy
- Shape your organisation's big data strategy by leveraging data science best practices
- Articulate your business requirements to data professionals

Audience

Business Development Executives

Business Intelligence Officers

Data Officers

Financial Analysts

Financial Decision Makers in Corporates

General Managers

Investment, Commercial and Retail Bankers

Management Consultants

Marketing Managers

Operations Managers

Project Managers

IT personnel

Outline

Day 1

Session I

Foundations of Big Data & Machine Learning

- Core Big Data and Machine Learning concepts
- Big Data and Financial Analytics State-of-the-Art and Developments
- Impact on the Financial Services sector
- Types of problems in Finance that can be solved using Machine Learning / Big Data analytics
- Machine Learning pipeline : From Data to Prediction

Session II

Key aspects of a successful Big Data Strategy

- The need for a Big Data Strategy
- Strategic Opportunities and considerations of a Big Data Strategy
- The six key aspects of a Big Data Strategy:
 - - Data: This involves data governance, massive reorganization of data architectures, Privacy and regulatory compliance
 - - Identification: This involves identifying business opportunities that could be harnessed by using Big Data / Machine Learning techniques
 - - Modeling: This involves determining how data models can improve performance and optimize business outcomes
 - - Tools: This involves choosing the appropriate Big Data Infrastructure and Tools for managing and analysing data
 - - Capability: This involves building a road map for assembling the right talent pool of the right size and mix
 - - Adaptation: this involves adjusting the company culture and making sure that the frontline decision makers understand and incorporate the voutput of modeling into their business decisions and core strategy

Session III

Framework for Big Data Projects : The Big Data Canvas

- A framework for thinking about, embracing and acting on a Big Data Strategy
- Acquiring data from the right sources, possibly involving massive reorganization of data from legacy IT systems and obtaining data from external data sources as well
- Implementing a data-governance standard across the organization to enable access control of data to meet compliance and regulatory obligations, simultaneously ensuring that the data is available to data professionals
- Identifying key business problems and determining how Big Data / Machine Learning can help optimize business outcomes
- Ensuring that the appropriate infrastructure and tools are used for storing, transforming and modeling data, finally making the modelling outcomes available to frontline managers
- Building capabilities by establishing the right talent pool with the right mix. This includes hiring/training Data Science Managers, Data Scientists, Data Developers, Software Developers and Business Analysts
- Choosing the correct business metrics to indicate success/failure of a big data project
- Arguably the most important action- swiftly adjusting company culture by making managers realize the value of Big Data and the importance of incorporating Big Data into the core strategy of the company

Team Challenge I

Plotting on the Big Data Canvas

- Participants are challenged in teams to create a preliminary Big Data Strategy based on the first 3 sessions
- Each team will be provided with an blank Big Data Canvas
- Members of each team must brainstorm and complete the Big Data Canvas, encompassing all aspects of a Big Data Strategy discussed (Data, Modeling, Tools, Capability, Adaptation) and other aspects such as Costs, Value Add.

Session IV

Big Data Landscape

- Overview of different technical components and solutions available for a Big Data Implementation
- A guide to choosing the appropriate set of solutions based on the the suite of business problems in the financial domain, the availability of skilled talent and company culture
- This includes separating the wheat from the chaff in the big data vendor ecosystem in areas of Infrastructure, Machine Learning, Analytics, Applications, Data Sources and Training
- Pros, Cons and considerations of choosing between Proprietary Vendor Products and Open Source in-house software solutions

Session V

Big Data: Tactics and Best Practices to Overcome Organizational Hurdles

- An overview of common organizational hurdles
- Key to effective use of Big Data - Data Governance platform to allow Internal cross-functional integration, and fulfilling data privacy and regulatory compliance obligations via data access auditing
- Means to provide seamless data access to data modellers and business insights to decision makers
- Scalable IT Infrastructure and the lack thereof, stemming from the existence of legacy systems

Team Challenge II

Implementation Roadmaps and Contingency Plans

- Participants are challenged in teams to test the robustness of their Big Data Canvas to implementation challenges
- Team members have to devise an implementation roadmap with several contingency plans for their Big Data Strategy
- A set of wildcards will be handed out, containing implementation challenges pertaining to their Big Data Canvas; teams must include solutions to these challenges in their contingency plans
- A volunteer from each group presents key findings that resulted from the discussions

Review and Discussion

Day 2

Case Studies I

Big Data: Applications in Finance Part I

- Churn Prediction & Prevention
- Loan Default Calculation/Prediction
- Quantitative Trading
- Sentiment Analysis
- Natural Language Processing of news sources/social media

Team Challenge III

Contextualising Case Studies

- Participants are challenged in teams to review the case studies and contextualize the examples to their own organizations and challenges

- Teams present their ideas as elevator pitches
- The instructor evaluated of how these applications can positively affect their organizations

Session VI

Communicating Business Objectives to Data Professionals

- Once business problems have been identified - it is important to to effectively communicate these ideas to data scientists
- Communication best practices and heuristics to communicate with professionals with a technical or quantitative background

Team Challenge IV

Communicating Requirements to Data professionals

- Participants must evaluate one or more business objectives discussed in the previous team challenges, and develop and communicate a strategy prompt in form of a short presentation

Case Studies II

Big Data: Applications in Finance Part II

- Market/Customer Segmentation - Targeted Marketing
- - Up selling financial products
- - Cross selling financial products
- Anomaly Detection
- - Customer Fraud Detection - Anti Money Laundering or Theft
- - Employee Fraud Detection - Rogue Traders
- Risk Management and Control

Team Challenge V

Contextualising Case Studies

- Participants are challenged in teams to review the case studies and contextualize the examples to the their own organizations and challenges
- Teams present their ideas as elevator pitches
- The instructor evaluated of how these applications can positively affect their organizations

Session VII

Financial Services of the Future: The Time to Harvest Your Data is Now

- Identifying key technologies and developments in data which will impact the financial services in the next 3 years

- The changing landscape when it comes to data architecture, governance, privacy, compliance and strategy

Session VIII

Disruptive Fintech - The Competitive Advantage of Data

- What risks do fintech firms pose to traditional financial service providers and how can they meet their challenger?
- Technologies such as Blockchain (a distributed public ledger for validating transactions) are challenging financial institutions on a fundamental level
- Creating value from the warehoused data provides banks with their unfair advantage. As fintech firms challenge the legacy systems of larger financial institutions by building products using the latest technology - they can by no means challenge/compete with the years of collected data

Review and Discussion

- A summary of key points covered during the workshop
- Guidance and resources on how to develop a deeper capacity for developing and executing on your Big Data Strategy