Data Science for Managers - Applications, Visualization, and Storytelling

Overview

The amount of data available to organizations and individuals is unprecedented. In order to maximize the use of these data assets, executives and managers need to know the ins and outs of data projects. They need to understand how data science can help solve a variety of business problems and unlock a plethora of strategic opportunities.

This one-day course equips business and finance managers with an overview of key analytical methods and data science tools required to create competitive advantages and solve difficult business problems. Participants will also learn about fundamental data visualizations and how to effectively storytell to key stakeholders with these visualizations.

This is not a programming-based course. The purpose of this course is to equip business and finance leaders with the right dose of knowledge and technical skills to better evaluate technical proposals, communicate with technical teams, hire technical teams, and use data science is a strategic tool. If you are interested in learning how to build these algorithms in a programming language such as Python, please check out our other courses such as Introduction to Data Science.

This course is often taught together with our Data Science for Managers - Building a Data-Driven Organization course over a two-day sequential workshop. Please contact us for more information about that course.

What This Course Offers

- High-level overview of data science and big data methods and why it is relevant for finance and business leaders
- Presentation of use cases and examples from industry of how data science can boost business performance and improve corporate bottom lines
- Understanding of the data science process and critical challenges
- Understanding of how to evaluate, interpret and present data science results to key stakeholders and technical teams
- Course notes, certificate of completion, and post-seminar email support for 1 year
- An engaging and practical training approach with a qualified instructor with relevant business, technical, and educational experiences

Who Is This For

This course is relevant for finance and business executives who supervise teams that identify and execute data analytics and business intelligence projects. Other junior and senior business professionals who want to better understand how data science can supercharge corporate analytics will also benefit from taking this course. Attendees range from C-suite executives to junior professionals who want to better understand what their bosses should know.

Course and Contact Information

Course Prerequisites: None
Duration: 1 Day
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Course Curriculum

- **Introduction**
  - What is data science, why is it relevant, what are use cases for different verticals/business functions
  - What is data-informed decision making, how data science can be incorporated with traditional decision making processes
- **The Data Science Process**
  - Overview of CRISP-DM, what does each stage of the CRISP-DM process accomplish, presentation of common challenges, what should managers know about this process
- **How Executives Can Use Various Data Science Methods To Solve Problems**
  - Definition of regression, classification, clustering, supervised learning, unsupervised learning and other common data science and machine learning methods
  - Presentation of use cases and different business situations, which problems can data science methods better explore and help solve
- **How Executives Should Evaluate Data Science Results**
  - Overview of common terminology for managers, how can we interpret data science results, when can we trust them, what questions should we ask
  - Presentation of powerful techniques to evaluate data science methods and results including assessing model complexity, cross-validation, confusion matrices, expected value, profit curves, ROC curves, statistical significance, hypothesis testing, etc.
- **From Data to Visualization and Storytelling**
  - Interpreting different data results and putting this together into presentations that illuminate key messages, overview of common visualization techniques,

the science behind when to use each. *(Note: this section is programming language/software agnostic and the learnings apply to any visualization software and tools that you use in your organization.)*
- How to come up with compelling reports and effective presentations, fundamentals of storytelling with data
- **The Data Science Tools and Software that Executives Should Invest In**
  - Overview of common data science technologies used by data scientists that managers should know about, which technologies should managers choose and why
- **Big Data Beyond the Hype - What Executives Need to Know**
  - What is big data and why is it relevant, overview of big data architectures and technologies, what are the different organizational/strategic/technological challenges, how can we overcome these challenges

Course Content Developers

David Haber

David heads Cognitir's products and technology. He has led programming workshops at the undergraduate and graduate levels, at blue chip companies, and world renowned management consulting firms.

David has experience working with both startups and large corporations. Previously, he was a lead software and machine learning engineer at Soma Analytics, an investor-backed and award-winning health-tech startup in London. David also worked on optimizing large-scale payment processing systems at Deutsche Bank in Singapore. Outside of Cognitir, he currently advises HiDoc, an early stage digital health startup in Germany.

David holds an MEng (First-Class Honours) in Computer Science from Imperial College London (UK) where he focused on statistical machine learning. He presented his work at international conferences and won several awards for his work. During his studies, he also served as a teaching assistant at Imperial College where he helped undergraduate students master fundamental computer science concepts.

Neal Kumar, CFA

At Cognitir, Neal leads strategy and business development initiatives and advises on new product development.

Outside of Cognitir, Neal consults C-level teams and senior business managers on a variety of strategic topics ranging from M&A to marketing. He also leads training seminars for Wall Street Prep and has consistently received top reviews from attendees and created two training courses that were used in seminars worldwide. Before his consulting and training careers, Neal taught secondary mathematics in St. Louis Public Schools (USA) as a Teach

for America Corps Member. Prior to joining Teach For America, Neal worked in investment banking at Lazard, JPMorgan, and Houlihan Lokey.

Neal received his MBA from London Business School (UK) and BBA in Finance from the University of Notre Dame (USA). He is also a CFA Charterholder and a Member of the CFA Institute Education Advisory Committee (EAC) Working Body where he helps shape CFA Program Content.