



Data Science for Managers - Applications, Visualization, and Storytelling

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.