# Data Science Curriculum for Managers

Data Society provides a comprehensive program teaching managers how to spot predictive analytics opportunities and understand machine learning algorithms. Clients learn how other organizations have successfully used predictive analytics and how they can build a data science team. By the end of this curriculum, clients will be able to:

1. Identify opportunities to deploy predictive analytics across all functions of an organization to increase efficiency and decrease cost
2. Identify which machine learning algorithms can be used to improve various business functions
3. Know how to check if their team is using predictive analytics correctly and taking into account all relevant assumptions and avoiding potential pitfalls
4. Know which tools, technologies and capabilities their team needs to have in order to have an effective data-driven organization
5. Understand what to look for in job candidates in order to hire capable professionals that will be able to successfully execute predictive analytics projects

## Materials provided:

1. In-person instruction as well as engaging, animated videos
2. Companion books with detailed step-by-step instructions for analyses

Hours of instruction time: 8 hours

# Data Science for Managers

Course curriculum:

1. Commercial applications of data science:

    a) What is data science and how is it related to Big Data?
    b) Use cases and success stories
    c) The challenges of using Big Data and predictive analytics

2. A taxonomy of data science methods:

    a) Categorizing observations: find similarities among various groups and identify patterns
    b) Relationship learning: analyze interactions between people, places and events to determine how messages, ideas and diseases spread
    c) Datafication: quantify non-numeric information to learn new insights – mine text and other types of data
    d) Prediction: [i.e. forecasting and event detection] how time and other variables affect events
    e) Outlier detection: identify anomalies, fraud and intrusions

3. Building a data-driven team:

    a) Which data analysis tools are available and which ones do you need?
    b) Create a data science capability: who is a data scientist and which one is right for you?