Course overview:

This program will give students the foundational skills they need in order to process, clean, and format text data for analysis, build predictive machine learning models as well as build and evaluate recommender systems based on real data.

4 days/ 3 hours per day (2.5 hours of instruction/ .5 hours for Q and A)

Instructor: Vignesh Narayanaswamy

Prerequisites:

Attendees must be comfortable using Python to manipulate data and must know how to create advanced visualizations in Python. Additionally, students must have a foundation in classification techniques.

Objectives:

- Program proficiently in Python
- Clean, process, and visualize text data
- Develop a framework for analyzing data to improve processes and accuracy
- Identify and define use cases for recommender systems
- Build and evaluate content-based recommender systems
- Build and evaluate item-based filtering algorithm

Topics covered:

1. Sentiment analysis
    a. Analyze the outcome of bag-of-words
    b. Apply logistic regression model to text data to determine positive and negative sentiment
    c. Evaluate performance

2. Introduction to recommender systems
    a. Summary of the usages and types of recommendation engines
    b. Description of the concept of a content-based recommender system

3. Building a recommender system
    a. Building a content-based recommender system
    b. Generating recommendations from the content-based recommender system

and discuss the pitfalls
c. Description of the collaborative filtering recommender system and its types
d. Building an item-based collaborative filtering algorithm
e. Evaluating the model using performance metrics

Instructor Bio:

Currently a full-time instructor for Data Society, Vignesh Narayanaswamy last worked as a data scientist at Bank of America, where most of his work focuses on building natural language processing models with customer call data. Previously, he was a data scientist at the Federal Reserve Bank of New York, where he focused on building quantitative models to measure the resiliency of financial institutions. Vignesh received an M.Eng. in Systems Engineering from the University of Virginia and a B.B.A. from Emory University's Goizueta Business School.