

Utility Analytics 101

Course Outline

[Day 1](#)

Welcome

- Introductions
- Expectations and goals
- Overview of software used in this course

Data & Analytics Overview

- Terms & relationships
- Analytics levels
- Maturity index
- Process model (CRISP-DM)

Business Understanding

- Utility use cases
 - Asset health
 - Customer analytics
 - Grid analytics
 - Safety analytics
- Training data overview

Data Understanding

- Understanding big data, data sources, and data types
- Data visualization
 - Fundamental concepts
 - Best practices
 - Hands-on demonstration in Excel

[Day 2](#)

Data Understanding (continued)

- Exploratory Data Analysis (+ data prep) with SQL
 - Relevant stats concepts
 - SQL Overview
 - Hands-on demonstration with PostgreSQL

Day 3

Communicating Results

- Clarify context and identify the audience
- Big Idea and storyboarding
- Telling a story

Application: Putting it all together with Python

- Jupyter Notebooks overview
- EDA with Python
- Understanding context exercise
- Data visualization for communication

Next Steps and Concluding Remarks