

### Module 1 – Introduction

- Workshop Expectations
- The 4 Levels of Analytics
- The Analytics Lifecycle
- The Datasets
- Data Types

### Module 2 – Profiling Your Data

- Understanding Data
- Introducing the ydata-profiling Library
- Data Profiling with ydata-profiling:
  - Data Summary
  - Character Data
  - Numeric Data
  - Date-Time Data
- Missing Data
- When Numbers Are Not Numbers
- Hands-on Lab #1

### Module 3 – The Mighty pandas

- Introducing the pandas Package
- Method Chaining
- Making Your Own Data
- Selecting Columns
- Filtering Rows
- Grouping & Aggregating Data
- Sorting Data
- Handling Categorical Data
- Hands-on #Lab 2

**Module 4 – Wrangling Strings**

- Why String Data?
- Case Folding
- Combining Strings
- String Lengths
- Extracting Substrings
- Detecting Strings
- Replacing Substrings
- Splitting Strings
- Trimming Strings
- Hands-on Lab 3

**Module 5 – Joining Data**

- Why You Join Data
- Left Joins with pandas
- Inner Joins with pandas
- Using Multiple Join Conditions

**Module 6 – Wrangling Dates**

- Why Date-Time Data is Complicated
- Beware, Date-Time Data!
- Date-Time Data & Machine Learning
- Wrangling Date-Time Data
- Parsing Date Strings
- Parsing Date-Time Strings
- Building Date-Times
- Extracting Date-Time Features

**Module 7 – Workshop Wrap-Up**

- What About the Test Dataset?
- Additional Resources
- Wanna Kaggle?
- **Hands-on Lab #4**