5.0.2 Module 5 Roadmap

Looking Ahead

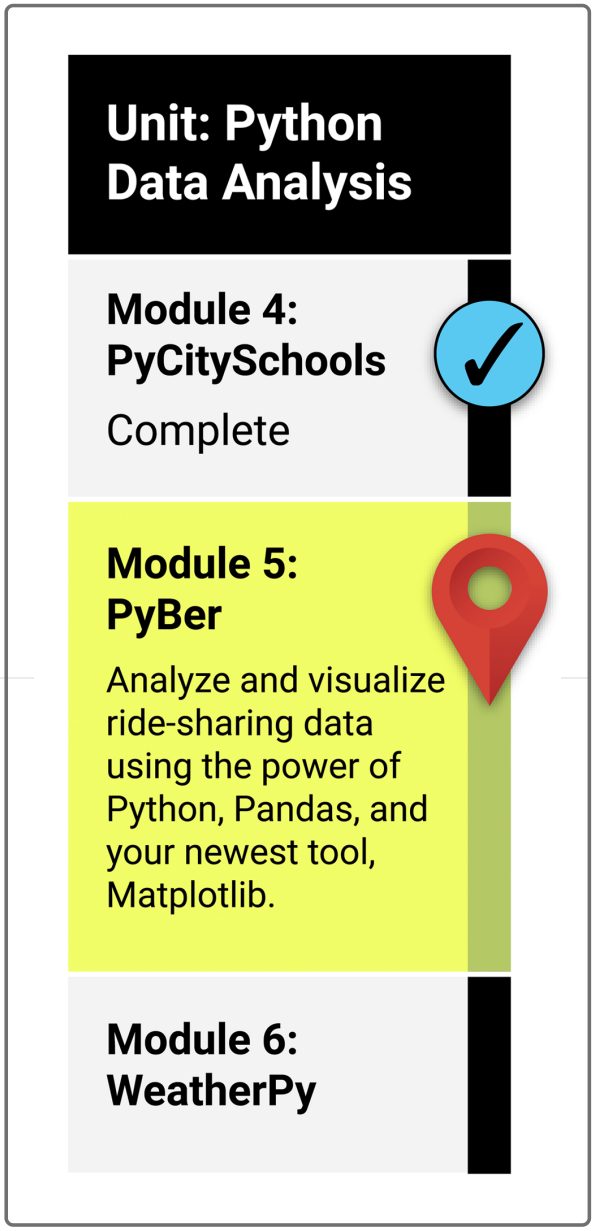
In this module, you'll learn how to graph data using the Matplotlib library. Matplotlib has a rich set of features for creating and annotating charts that visualize data in a Data Series or DataFrame. You'll use Matplotlib to create line charts, bar charts, scatter plots, bubble charts, pie charts, and box-and-whisker plots, and make them visually compelling and informative by adding titles, axes labels, legends, and custom colors. You'll also be introduced to SciPy, a statistical Python package, and NumPy, a fundamental package for scientific computing in Python. You'll use Pandas, SciPy, and NumPy to perform summary statistics.

As you build a variety of charts, you'll leverage your knowledge of Python arrays and tuples, and learn how to apply Pandas methods, functions, and conditional expressions, as well as perform mathematical calculations on Series and DataFrames.

What You Will Learn

By the end of this module, you will be able to:

- Create line, bar, scatter, bubble, pie, and box-and-whisker plots using Matplotlib.
- Add and modify features of Matplotlib charts.
- Add error bars to line and bar charts.
- Determine mean, median, and mode using Pandas, NumPy, and SciPy statistics.



Planning Your Schedule

Here's a quick look at the lessons and assignments you'll cover in this module. You can use the time estimates to help pace your learning and plan your schedule.

- Welcome to Module 5 (30 minutes)
- Create Visualizations Using Matplotlib (3 hours)
- Convert CSV Files to Pandas DataFrames (1 hour)
- Create a Bubble Chart for Ride-Sharing Data (3 hours)
- Calculate Summary Statistics (2 hours)
- Pie Chart: Percentage of Total Fares by City Type (1 hour)
- Pie Chart: Percentage of Total Rides by City Type (1 hour)
- Pie Chart: Percentage of Total Drivers by City Type (1 hour)
- Application (5 hours)