OIM 7502 Spring 2025 – Midterm Project

Exploring a Third Party Python Package

Overview

Take a Deep Dive on a Python third party library not discussed in class or take a deeper look at something we just touched on in class. Choose a library listed in the spreadsheet on Canvas *or* choose a library not listed there. When choosing one from the list, it will be one student per library and first come, first served. In exceptional cases I may allow a maximum of two students to work together on the same library. In this eventuality, it will be expected that the work product reflect the effort of two students.

You will investigate the library how to use the library and present it to the class in a 30 - 40 minute presentation. You will conduct a detailed walk through of the library's functionality and important capabilities. Submission deliverables should include:

1. slide deck
2. tutorial
3. README.md file with library overview, install instructions and documentation
4. code examples

All materials can be submitted via Github repository. The URL for the repository should be posted to the canvas assignment for the midterm.

Coding Checklist

- Follow good coding principals (see PEP-8):
- Make your code as modular and easy to read
- Include docstrings and inline comments only as needed
- Use meaningful variable names.
- Code must run and produce correct output

Mandatory Documentation String

Use this documentation string at the top of your main Python code file:

```
"""Name:      Your Name:
Library:     Library you are demonstrating
URL:      Link to library documentation
Description:
This library... (a few sentences about the library and its utility)"""
```

Presentation

Plan to present your deep dive to the class during the second half of the semester with the overarching theme being: *Why would a "Data Scientist" use this?* Presentation should include slides as well as a demonstration of the library chosen in action. Presentations should be 10 -12 minutes in duration.

Grading Guidelines

Requirement		Points
Proposal:	Library chosen on time	5
Slide Deck:	Well designed, covering important aspects of library and highlights/ code snippets	10
Coding:	Contains enough depth and code examples so that people unfamiliar with the library (but familiar with Python) understand how and why to use the library	25
Coding:	Demonstrates more than a topical treatment of the library	10
Coding:	Contains Examples relevant to a "Data Scientist"	10
Coding:	Quick start tutorial demonstrating 1 – 3 basic capabilities	10
Repo:	All code and documentation shared in Github Repository, with meaningful README.md	15
Coding:	Follows PEP-8 guidelines, well documented, efficient, modular	10
Project:	Compared to peers	5
Total:		**100**