Python Project

Due Dec 10th 2018

Must Meet 4 Requirements

1. Must involve reading in Files(CSV, TXT) OR interacting with Databases (SQL, PostGRESQL or MongoDB).

2. Must Involve NumPY OR Pandas OR SciPY

3. Must have a Visualization component – either Data Visualization or a GUI or

4. A learning component beyond that is covered in class.

Deliverables

- A Less than 2-min video describing your Project
  - Explain the problem and/or Dataset
  - What you want the program to do
  - Show the output of the program
  - Explain any unique features that you incorporated.

- Grading Criteria
  - Code Construction (40points)
    - File Organization
    - Commenting of Code
  - Technical Complexity of Program (35points)
  - Video Presentation (25points)

Criteria that I would consider a Bad Project

- This project is a direct copy from the web. Please cite all data sets or data sources used.
- This obviously takes 2 days to complete
- Did not take any risk. Nothing new learned by the student.
- Really bad code organization and explanation
- Nothing Works…the solution is hard-coded in.

TA and Myself

- TA’s will not have the time to debug the code for you. Do not send code over to them to fix.
- However Instructors + TA can help point to any specific way to go about building the solution for the project.

Sample New Learning Component

- Network Analysis
- Advanced Data Visualization
- Image and/or Video Analysis Libraries
- Building GUI
- Machine Learning (NLP, DeepML)
- Geometric Processing
- Finite Element Analysis, Comp. Fluid Dynamics

Sample Project Themes

- A 3D Game
- Data Entry, Data Recording, Report Dashboard
- A Recommendation and Prediction System
- Simulation (Discrete, Continuous)
- Munging through Large Datasets
- Network Analysis (Traffic, Social,Transport)
- Machine Learning (NLP, DeepML)
- Automation of Tasks
- Web Scraping (Legal ofcourse)