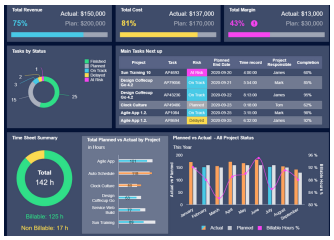

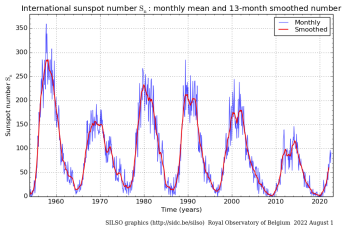

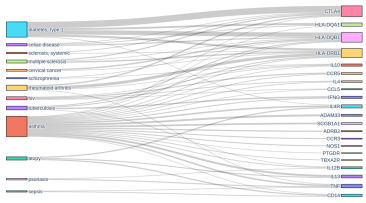

Dashboards: Interactive Exploration and Discovery

DS3500: Advanced Programming with Data

Prof. Rachlin

Introduction

Your goal is to construct an innovative easy-to-use dashboard to enable users to interactively explore a dataset *of your own choosing!* Find a subject matter that you love and demonstrate how interactive visualization can enable users to discover interesting insights from within that data. This assignment does have a few technical guidelines and minimal deliverables listed below, but the subject matter is entirely up to you. We'll share our dashboards in a future class, and perhaps look closely at the implementation details for a few select projects.

Minimal Requirements:

- Implement your dashboard in Holoviz Panel. (Panel supports most visualization libraries including matplotlib, plotly, etc.)
- The dashboard layout of the dashboard is up to you but try to make your dashboard controls and outputs fit within a single viewing window for ease-of-use and use panel tabs to render more content as needed.
- Demonstrate a nice variety of different Holoviz Panel widgets.
  See https://panel.holoviz.org/reference/index.html for detailed documentation.
- As with the GAD example I demonstrated in class, you should manage access to your data via a well-designed API that mediates data passing between the backend data and your frontend user interface. The backend can consist of files loaded into dataframe or if you are ambitious, you might consider managing your data in a database such as SQLite. (This may make the API implementation much simpler!)

- Create a one slide poster showing a screen shot of your dashboard along with some explanatory text. I'll provide you with a PowerPoint template.

What to Submit

- Your beautifully modular and well-documented code (.py)
- Your ONE SLIDE poster in PDF format. (No PPTX please!)
- Your data, if feasible. TAs and I might try to run your dashboard code when grading.