Data Visualization Final Project

Fall 2022

Requirements:

- Choose one of the three options for the data
- You need to present the python code resulting in each of the insights.
- You need to include maps and any necessary plot which supports your insight about the data.
- You can use any library (matplot, plotly, …) to derive the insights.
- Provide information of each team member's contribution in the project.
- Order the presentation in a way that the most important insight comes first and then continues to the other insights.
- You need to include a description for each plot so the general audience can understand the insight without your oral presentation
- Presentation time is about 10 minutes per team. (8 minutes for presentation, 2 minutes for the QA)
- Your work and analysis must be original.

Submission

Submit the following artifacts to iCollege (One submission per team):
- Google Colab Notebooks + source code
    - Make sure your code is well documented.
- PowerPoint slides

Datasets

1. US Prevailing Wage Program

Visit the following link and download the "Prevailing Wage Program" data:
The data contains information from 2012 to 2020. In the "Program Record Layout" field, you can find the explanation for each of the columns.

Prevailing Wage Program

Fiscal Year	Disclosure File	Program Record Layout
2020	PW Case Data 2020.xlsx PW_Worksites_FY2020.xlsx	PW_Record_Layout_FY2020.pdf PW_Worksites_Record_Layout_FY2020.pdf
2019	PW Case Data 2019.xlsx	PW Record Layout FY19.pdf
2018	PW Case Data FY2018.xlsx	PW Record Layout FY18.pdf
2017	PW Case Data FY2017.xlsx	PW Record Layout FY17.pdf
2016	PW Case Data FY2016.xlsx	PW Record Layout FY16.pdf
2015	PW Case Data FY2015.xlsx	PW Record Layout FY15.docx
2014	PW Case Data FY2014.xlsx	PW Record Layout FY14.doc
2013	PW Case Data FY2013.xlsx	PW Record Layout FY13.doc
2012	PW Case Data FY2012.xlsx	PW Record Layout FY12.doc

The objective is to extract insights (e.g. Trends, Geographical distribution, …) of the wages based on information from the PW cases. You may want to look into job categories, applicant's education background (BS, MS,...), … .

2. Unemployment Rate

Visit the following link to download the unemployment data. This file contains a description of the dataset and how to interpret the content of each file.

https://download.bls.gov/pub/time.series/la/

This page provides a national view of the data as well as local counties.
Derive insights about unemployment ratio on different levels of granularity.

3. Bring your own Dataset

You may choose your dataset that fits the following guidelines:
- Use a dataset that contains detailed information, preferably have spatial and temporal dimensions, categorical features, etc.
- Provide the source of your data.
- Use only public datasets and make sure there is no conflict of interest.