**Data Visualization Track Requirements (75 points)**

**Data and Delivery (20 points)**

* The dataset contains at least 100 unique records. (5 points)
  + Project 3 -> Data -> Merged -> Complete -> Merged\_data.csv
* A database is used to house the data (SQL, MongoDB, SQLite, etc.). (5 points)
  + Project 3 -> Data -> Merged -> Merging Code -> data\_frame\_merging.sql
* The GitHub repo has a README.md that includes the following: (10 points)
  + An overview of the project and its purpose
    - README.md
  + Instructions on how to use and interact with the project
    - Project 3 -> Flask\_app -> interactive map application instructions
  + At least one paragraph summarizing efforts for ethical considerations made in the project
    - README.md
    - Project 3 -> Project Description
  + References for the data source(s)
    - References found in code where needed
  + References for any code used that is not your own

**Visualizations (25 points)**

* A minimum of three unique views present the data. (10 points)
  + Project 3 -> Coorelation
  + Project 3 -> flask\_app
* The visualizations are presented in a clear, digestible manner. (5 points)
* The data story is easy to interpret for users of all levels. (10 points)

**Usability (30 points)**

* The script, notebook, or webpage created to showcase data visualizations runs without error. (10 points)
* A Python or JavaScript library not shown in class is used in the project. (10 points)
* The project includes some level of user-driven interaction, conforming to one of the following designs: (10 points)
* ^^^ Project 3 -> Flask\_app -> app.py
* ^^^Project3 -> Flask\_app -> static -> js -> tracts\_map.js
  + HTML menus, dropdowns, and/or textboxes to display JavaScript-powered visualizations
  + Flask backend with interactive API routes that serve back Python or JavaScript created plots
  + Visualizations created from user-selected filtered data

**Data Engineering Track Requirements (75 points)**

**Database Design (40 points)**

* The project uses ETL workflows to ingest data into the database. (10 points)
  + Project\_3 -> Data -> Cleaning/Mapping/Grouped Data/Merged
* The original dataset(s) are transformed prior to storing it in the database. (5 points)
  + Project\_3 -> Data -> Cleaning/Mapping/Grouped Data/Merged
* A database is used to house the data (SQL, MongoDB, SQLite, etc.). (5 points)
  + Project\_3 -> Data -> Cleaning/Mapping/Grouped Data/Merged
* The database has at least two tables (SQL) or collections (NoSQL). (5 points)
  + Project\_3 -> Data -> Cleaning/Mapping/Grouped Data/Merged
* The project documents the choice of the database used and why. (5 points)
  + We used an SQL database to merge and store the datasets for crime, census, and educational attainment data. SQL was chosen because it is efficient for managing structured data, joining datasets, and retrieving information dynamically for the app.
* The project includes documentation of the ETL workflow with diagrams or ERD. (10 points)
  + Refer to the structured folders in repository

**Data and Delivery (35 points)**

* The database contains at least 100 unique records. (5 points)
  + Project 3 -> Data -> Merged -> Complete -> Merged\_data.csv
* The project uses one additional library not covered in class related to data engineering. (10 points)
  + Project\_3 -> flask\_app -> app.py
* The project includes a method for reading data from the database and displaying it for future use, such as: (10 points)
  + Pandas DataFrame
    - Project\_3 -> Correlation -> correlation\_analysis.ipynb
  + Flask API with JSON output
    - Project\_3 -> flask\_app -> app.py
* The GitHub repo has a README.md that includes the following: (10 points)
  + An overview of the project and its purpose
  + Instructions on how to use and interact with the project
  + At least one paragraph summarizing efforts for ethical considerations made in the project
  + References for the data source(s)
  + References for any code used that is not your own

**Both Track Requirements**

**Group Presentation (25 points)**

* All group members speak during the presentation. (5 points)
* The content is relevant to the project. (5 points)
* The presentation maintains audience interest. (5 points)
* Content, transitions, and conclusions flow smoothly within any time restrictions. (10 points)