- chart\_defaults.py
  - o Contains default values and utility methods for the matplotlib based charts
- chart\_panel\_options.py
  - PyQt5 user-interface for the chart options dialog
  - Created using QtDesigner and pyuic
- DataHelper.py
  - Module for the Database class used by the Project class to store the project data
- fhwa\_spl.py
  - o Effectively the "main" class of the program
  - o Includes code for the MainWindow application
  - Also defines the core Project class
  - Has leftover code defining the FlaskThread for potential future web/d3js visualizations
- fhwa\_spl\_flask.py
  - Starts the local flask server that runs the webview/d3js visualizations
- mpl\_charts.py
  - Creates the matplotlib charts via FigureCanvas for the visualizations
  - All charts the MplChart class, but the visualization is determined by the "fig\_type" field
  - Contains the ZoomPan class for dynamic interaction with the MPL charts without the need for the navigation toolbar.
- mpl\_panels.py
  - Panel to hold a grid of MplChart objects
  - Has additional filtering controls built in
    - TMC selection combo box
    - Peak hour selection combo box
    - Weekday/Weekend/Day of week checkboxes
  - o Currently limited to a 2x2 grid
  - Interacts the with ChartOptions object of the project that is created/edited by the chart\_panel\_options dialog
- mw\_test.py
  - o PyQt5 user interface for the MainWindow of the program.
  - Designed using QtDesigner and created using pyuic
- offline viz.py
  - Originally a testbed file to create matplotlib charts, but now holds a few of the currently used charts
  - In the process of migrating key functionality into the more streamlined mpl\_charts module
  - Currently only has code for the Extra Time and Speed band charts, as well as a 2x2 grid panel to hold them
- sql\_helper.py
  - o SQL database helper file
  - Contains the functions to initialize, create, and close a project's SQL database

## viz\_qt.py

- o Module that houses some Qt-based data-loading classes.
- Also contains the primary function currently used to load the data from the csv files into a Project class

## stat\_func.py

 $\circ\quad$  Module that houses various statistical and data aggregation functions for the tool.