The first step in this mini-project was reading up on ‘Streamlit’. I went through the documentation for some time and tried implementing a basic web-app to make myself comfortable with the library.

Then, I opened the csv file to visually inspect it to find missing or incorrect data. I found that the entire ‘time\_stamp’ column was filled with NaN values. To address this issue, I pre-processed the data and filled the column with random datetime values.

Next, I created the ‘q1.py’ file in which I got a valid integer input from the user for the number of rows to visualize. I also added the code to load the csv file into a Pandas DataFrame using ‘pd.read\_csv()’ method. It takes the number of rows to load (nrows) as an argument which I used to solve the problem of dynamically displaying the number of rows.

Graphical user interface, application, table

Description automatically generated

The next problem that arose was plotting the graph and implementing the grid display. For the graph, I had to get the unique function names first and create a temporary dataframe for each function. I then plotted the graph of ‘Time’ vs ‘time\_stamp’ using plotly.express and streamlit.plotly\_chart().

Chart, line chart

Description automatically generated

Finally, I got the idea to dynamically change the number of columns for the grid display. I used streamlit.columns() and streamlit.selectbox() to complete this task.