

A screenshot of the Visual Studio Code (VS Code) interface. The main editor window displays a Python script named `streamlit_app.py`. The code imports Streamlit, Pandas, and Matplotlib, sets up a Streamlit configuration, and defines a function to handle CSV file uploads. It then reads the uploaded CSV, displays its preview, and shows its descriptive statistics. The Streamlit API is used to select a column for plotting, and a warning message is displayed if no numeric columns are found.

```
25-11-2025 > streamlit_app.py > ...
1 import streamlit as st
2 import pandas as pd
3 import matplotlib.pyplot as plt
4
5 st.set_page_config(page_title="CSV Data Analyzer", layout="wide")
6 st.title("CSV Data Analysis Web App")
7
8 # File Upload
9 uploaded_file = st.file_uploader("Upload your CSV file", type=["csv"])
10
11 if uploaded_file:
12     # Read CSV
13     df = pd.read_csv(uploaded_file)
14
15     st.subheader("Data Preview")
16     st.dataframe(df)
17
18     st.subheader("Data Description")
19     st.write(df.describe())
20
21     # Select column for plotting
22     numeric_cols = df.select_dtypes(include=['int64', 'float64']).columns
23
24     if len(numeric_cols) > 0:
25         st.subheader("Matplotlib Charts")
26
27         col = st.selectbox("Select a numeric column to visualize:", numeric_cols)
28
29         # Line plot
30         st.write("## Line Chart")
31         fig, ax = plt.subplots()
32         ax.plot(df[col])
33         ax.set_title(f"{col} Line Plot")
34         ax.set_xlabel("Index")
35         ax.set_ylabel(col)
36         st.pyplot(fig)
37
38         # Histogram
39         st.write("## Histogram")
40         fig2, ax2 = plt.subplots()
41         ax2.hist(df[col], bins=20)
42         ax2.set_title(f"{col} Histogram")
43         ax2.set_xlabel(col)
44         ax2.set_ylabel("Frequency")
45         st.pyplot(fig2)
46
47     else:
48         st.warning("No numeric columns found for plotting.")
49
50 else:
51     st.info("Please upload a CSV file to proceed.")
```

The terminal panel shows the command `streamlit run streamlit_app.py` being run, and the output indicates the app is running at `http://localhost:8501` and `http://192.168.1.41:8501`.

A screenshot of the Visual Studio Code (VS Code) interface, identical to the first one but showing a different portion of the code. The editor window displays the same `streamlit_app.py` script, focusing on the section where it handles numeric columns for plotting. It includes code for creating line plots and histograms, and handles the case where no numeric columns are found by displaying a warning message.

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A screenshot of a web browser displaying the Streamlit application. The page title is "CSV Data Analysis Web App". The content area shows a header "Data Preview" with a table of data, followed by a header "Data Description" with descriptive statistics. Below this, there is a message "No numeric columns found for plotting." indicating that no numeric columns were found in the uploaded CSV file.

```
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49
50 else:
51     st.info("Please upload a CSV file to proceed.")
```