Project preview

The **Smart Data Analyzer & Visualizer** is a Python desktop app I created to make working with data simple, fast, and interactive. It features a clean, easy-to-use interface built with **Tkinter**, while **Pandas** takes care of data cleaning and organization, **NumPy** handles quick and accurate statistical calculations, and **Matplotlib** transforms data into clear, engaging visuals. You can load CSV or Excel files, preview and clean them, calculate statistics like mean, median, standard deviation, and correlation, filter and sort results, and generate various charts — from line and bar graphs to histograms and scatter plots. To improve usability, I included **dark/light mode**, **multi-language support** (English and Bangla), **threaded processing** for a smooth experience, and **real-time plotting** for live data updates. Processed results can be exported in **CSV, Excel, or JSON** formats. Its **modular structure** makes it easy to maintain, extend, and adapt for research, teaching, or professional projects.