

Data Analytics with Streamlit

Building Interactive Data Analysis
Apps with Streamlit
by Daniel Emakporuena

Introduction

The Data-Cent Data Analytics App is a Python-powered solution for data exploration and visualization. It simplifies the process of analyzing datasets with an intuitive interface built using Streamlit and encourages self learning.

Problem and Solution

Problem:

- Manual data analysis is time-consuming and error-prone.
- Lack of user-friendly tools for quick insights.

Solution:

- Data-Cent App provides an intuitive platform for data upload, analysis, and visualization.
- Interactive dashboards and automated exploratory data analysis (EDA).

Key Features

- **Data Upload and Management:** Supports uploading datasets in multiple formats (e.g., CSV, JSON, XLSX) and provides options to use sample data for quick analysis.
- **Automated EDA:** The app automatically generates summary statistics and visual insights, aiding users in understanding data distributions and relationships.
- **Dashboard:** Users can create and customize various visualizations, such as scatter plots, bar charts, pie charts, and treemaps, to explore data dynamically.

Demo Overview

This demo will showcase:

- Data upload and exploration features.
- Interactive dashboards for visualizations.
- Automated Exploratory Data Analysis (EDA).
- Smooth navigation between app sections.

Technologies Used

- Python for data processing and backend development.
- Streamlit for building the interactive web interface.
- Plotly, matplotlib, and seaborn for visualizations.
- Deployed on Streamlit Cloud for free

Lessons Learned & Future Plans

Lessons Learned:

Importance of user-friendly design and interactivity.

Challenges in handling large datasets efficiently.

Future Enhancements:

Add machine learning features for predictive analysis.

Increase support for larger datasets and more visualization options.

Thank You!