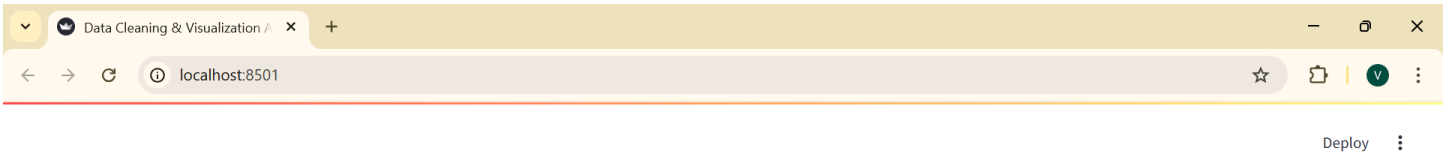
Data Cleaning & Visualization App (Streamlit,Python)

Overview	This project is an **interactive web-based data cleaning and visualization tool** built using **Streamlit, Python, Pandas, and Matplotlib**.
Objective	To **eliminate the repetitive effort of writing data-cleaning code again and again for every new file**, enabling users to clean, explore, and visualize datasets through a simple, reusable interface.
What it does:	The application allows users to upload CSV or Excel files, perform common data cleaning operations, explore dataset summaries, visualize numeric data, and download cleaned datasets — all without writing code, making data preparation faster and more efficient.
Tools used:	**Frontend / App Framework:** Streamlit **Programming Language:** Python **Data Handling:** Pandas **Visualization:** Matplotlib **File Formats Supported:** CSV, XLSX
workflow	1. Upload a CSV or Excel file 2. Preview raw dataset 3. View data summary and missing values 4. Apply cleaning operations from sidebar. 5. Remove duplicate rows 6. Fill missing values (Mean, Median, Mode, Forward Fill) 7. Preview cleaned dataset for having insight view 8. Generate visualizations simple but major. 9. Download cleaned data through a button.
Impact	Designed a reusable data-cleaning solution that reduced manual effort by 70%+, ensured consistency across datasets, and accelerated insight generation.
What next	Looking forward to integrating SQL and PostgreSQL support and connecting datasets to Power BI for advanced analytics and enhanced reporting functionality.
Github link:	https://github.com/khedkarvaishnavi9595/Data_Cleaner_App

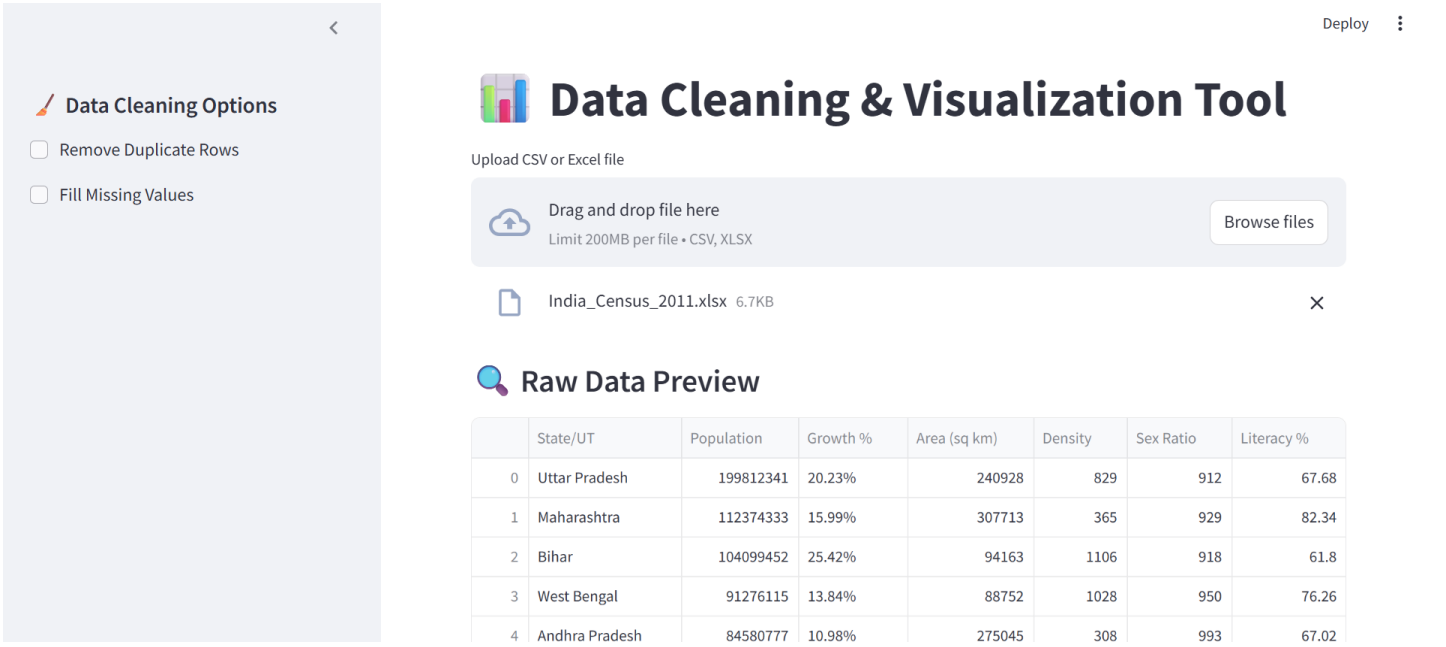


Deploy

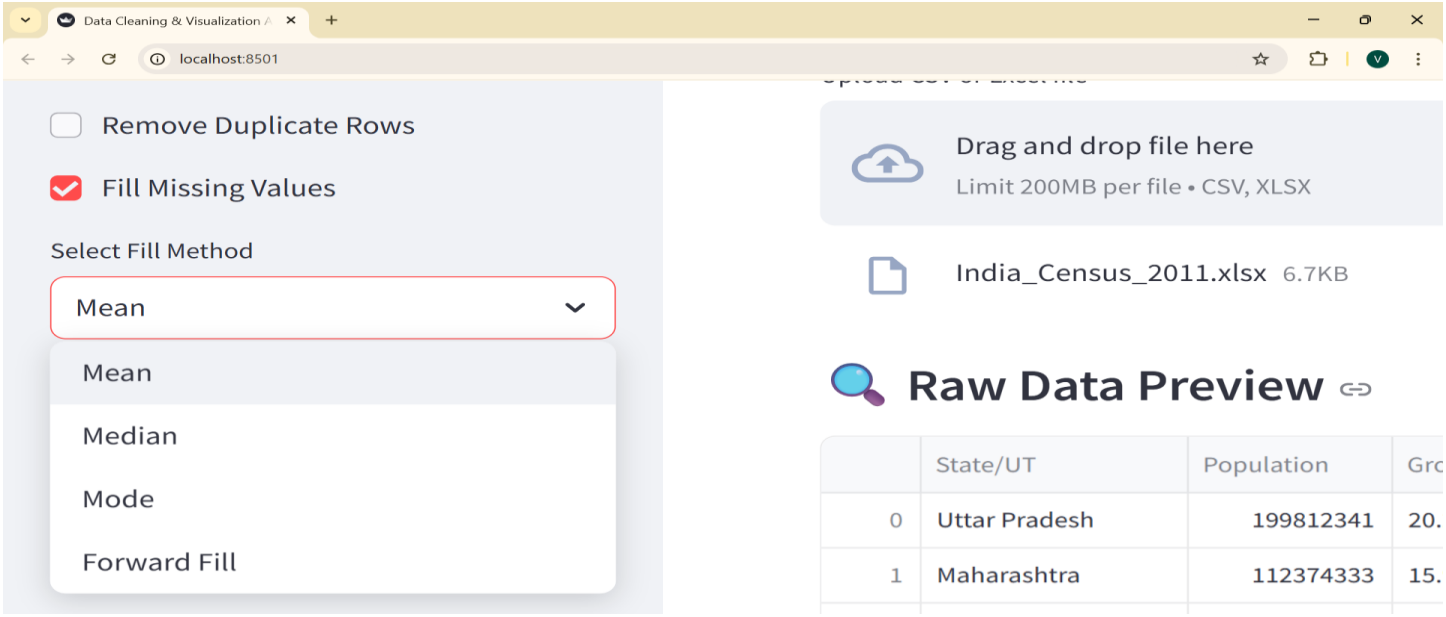
Data Cleaning & Visualization Tool

Upload CSV or Excel file

Drag and drop file here
Limit 200MB per file • CSV, XLSX
Browse files



	State/UT	Population	Growth %	Area (sq km)	Density	Sex Ratio	Literacy %
0	Uttar Pradesh	199812341	20.23%	240928	829	912	67.68
1	Maharashtra	112374333	15.99%	307713	365	929	82.34
2	Bihar	104099452	25.42%	94163	1106	918	61.8
3	West Bengal	91276115	13.84%	88752	1028	950	76.26
4	Andhra Pradesh	84580777	10.98%	275045	308	993	67.02



	State/UT	Population	Gro
0	Uttar Pradesh	199812341	20.
1	Maharashtra	112374333	15.

Data Cleaning Options

- [ ] Remove Duplicate Rows
- [x] Fill Missing Values

Select Fill Method

Mean

Data Summary

Rows	Columns	Duplicate Rows
35	7	0

Missing Values

	0
State/UT	0
Population	0
Growth %	0
Area (sq km)	0
Density	0

Data Cleaning Options

- [ ] Remove Duplicate Rows
- [x] Fill Missing Values

Select Fill Method

Mean

Cleaned Data Preview

	State/UT	Population	Growth %	Area (sq km)	Density	Sex Ratio	Literacy %
0	Uttar Pradesh	199812341	20.23%	240928	829	912	67.68
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4	Andhra Pradesh	84580777	10.98%	275045	308	993	67.02
5	Madhya Pradesh	72626809	20.35%	308252	236	931	69.32
6	Tamil Nadu	72147030	15.61%	130060	555	996	80.09
7	Rajasthan	68548437	21.31%	342239	200	928	66.11
8	Karnataka	61095297	15.60%	191791	319	973	75.36
9	Gujarat	60439692	19.28%	196244	308	919	78.03

Data Visualization

Select Chart Type

Bar Chart

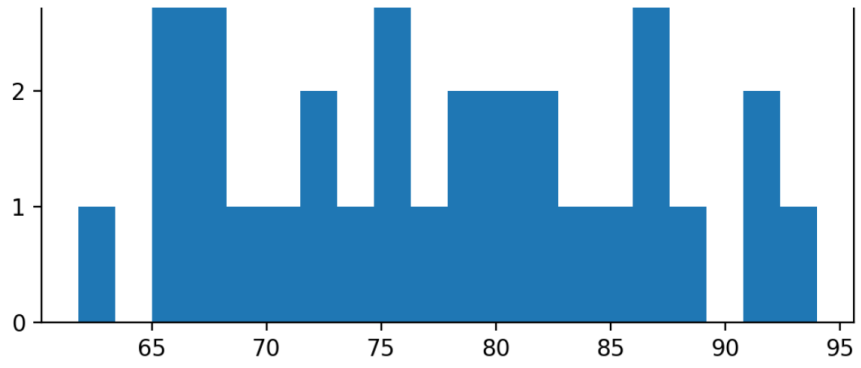
Data Cleaning Options

- [ ] Remove Duplicate Rows
- [x] Fill Missing Values

Select Fill Method

Mean

Deploy



Download Cleaned Data

Download as CSV