

SigmaValue Full Stack Developer Assignment

Assignment Details

Technical Assignment: Build a Mini Real Estate Analysis Chatbot (React + Django)

Objective

Build a **web-based chatbot interface** that accepts user queries related to real estate localities (e.g., “Analyze Wakad”), processes the provided Excel dataset, and returns:

- A short natural-language summary (mocked or real using an LLM)
 - A chart (price trend, demand trend, etc.)
 - A filtered data table extracted from the Excel file
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Provided

A sample Excel file containing real estate data (year, area, price, demand, size, etc.)

 Sample file:

[https://docs.google.com/spreadsheets/d/1BPFvRBLAFFLyQ1EDJ4ogXt8HYCUXhM80/edit
?usp=sharing&ouid=106548111997272759849&rtpof=true&sd=true](https://docs.google.com/spreadsheets/d/1BPFvRBLAFFLyQ1EDJ4ogXt8HYCUXhM80/edit?usp=sharing&ouid=106548111997272759849&rtpof=true&sd=true)

Sample Queries

- “Give me analysis of **Wakad**”
 - “Compare **Ambegaon Budruk** and **Aundh** demand trends”
 - “Show price growth for **Akurdi** over the last 3 years”
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Requirements

Backend (Django + Python)

- Accept file upload OR use a preloaded Excel dataset

- Parse Excel and filter results based on area/user query
 - Return:
 - Text summary (mock LLM output is allowed)
 - JSON output for chart (price/demand per year)
 - Filtered table data
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Frontend (React + Bootstrap)

- Chat-style or simple query input UI
 - Should display:
 - Text-based summary
 - Chart (Chart.js, Recharts, etc.)
 - Filtered table
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Bonus (Optional)

- Integrate OpenAI API or any other LLM to generate real summaries
 - Add a "Download Data" option
 - Deploy on **Vercel / Render / Heroku / Netlify** etc.
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Submission Requirements

-  GitHub repository with complete code + README (mandatory)
 -  Live demo link (if deployed)
 -  Short demo video (1–2 minutes) showing how the assignment works (compulsory)
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Evaluation Criteria

- Code structure & readability
- UI/UX and backend integration
- Accuracy of Excel data processing
- Chart clarity and correctness
- Bonus points for LLM integration & deployment