

# Sigmavalue Full Stack Developer Assignment




## Assignment Details

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### 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&oid=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

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##### 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