**Full Stack Development Project Documentation**

**Project Title:** Visualizing Housing Market Trends: An Analysis of Sale Prices and Features Using Tableau  
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**1. Introduction**  
  
This project focuses on visualizing housing market trends through interactive Tableau dashboards.  
By analyzing features such as sale prices, lot area, quality scores, and construction year,  
the platform enables users to gain insights into how these factors affect real estate values over time.  
The goal is to help buyers, sellers, and real estate analysts make informed decisions using intuitive and data-driven visual tools.

**2. Project Overview**

• Purpose: Analyze and visualize housing market trends using Tableau.  
• Features: Upload CSV, generate insights (price vs. area, trends, feature analysis).

**3. Architecture**

• Frontend: HTML upload interface  
• Backend: Python (Flask) for preprocessing  
• Visualization: Tableau dashboards

**4. Setup Instructions**

• Prerequisites: Python, Flask, Tableau  
• Steps:

1. Download dataset
2. Clean with Python
3. Import into Tableau
4. Optionally use Flask app

**5. Folder Structure**

* /data → datasets
* /flask\_app → HTML, Python scripts
* /tableau → .twbx files, images

**6. Running the Application**

* python app.py (Flask)
* Open Tableau workbook

**7. API Documentation (Optional)**

* POST /upload
* GET /dashboard

**8. Authentication**

Not implemented; optionally use JWT

**9. User Interface**

Simple HTML form and dashboard links

**10. Screenshots or Demo**

• Sample Tableau dashboard showing housing price trends:  
📷 *(Image is embedded in the downloadable DOCX file)*

**11. Testing**

* Data cleanup verified in Python
* Tableau filters tested
* File upload validated

**12. Known Issues**

* Large dataset lag
* Requires CSV formatting

**13. Future Enhancements**

* Add ML predictions
* Add geo-maps
* Host dashboards online