

Project Design Phase-I

Problem – Solution Fit Template

Date	31 January 2026
Team ID	LTVIP2026TMIDS28502
Project Name	Visualizing Housing Market Trends: An Analysis of Sale Prices and Features using Tableau
Maximum Marks	2 Marks

Problem – Solution Fit Template:

The Problem–Solution Fit for this project focuses on identifying the challenges faced by students, data analysts, and stakeholders when working with large housing datasets and providing an effective visualization-based solution using Tableau. Raw housing data stored in CSV format contains numerous records and attributes such as sale price, renovation status, house age, and structural features. However, analyzing such data directly from tables or spreadsheets makes it difficult to identify patterns, trends, and meaningful insights.

Purpose:

- ❑ Solve the problem of interpreting large and complex housing datasets by providing interactive visual dashboards and visualizations using Tableau.
- ❑ Improve data analysis efficiency by enabling users to identify housing trends, renovation impact, and feature-based comparisons quickly and accurately.
- ❑ Enhance user understanding and communication of housing market insights through clear visual representations and structured dashboard design.
- ❑ Increase accessibility and usability by publishing dashboards to Tableau Public and integrating them into a web application for easy access and demonstration.
- ❑ Provide a scalable and flexible visualization solution that can be extended with additional datasets, new visualizations, and advanced analytics features in the future.

Template:

Problem-Solution Fit canvas		Purpose / Vision	Version:
<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 0.8em;">Define CS, fit into CL</div> <div> 1. CUSTOMER SEGMENT(S) CS Students working on data analytics and visualization projects. Data analysts who need to analyze housing datasets and identify trends. Researchers studying housing market patterns and structural relationships. Stakeholders and evaluators who need clear visual reports and dashboards. </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 0.8em;">Focus on PR, tap into BE, understand RC</div> <div> 2. PROBLEMS / PAINS PR ITS FREQUENCY Users find it difficult to understand housing market trends from raw data. Analyzing large datasets manually is time-consuming and inefficient. Users cannot easily identify the impact of renovation, house age, and structural features. Presenting analysis results clearly without visual dashboards is challenging. </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 0.8em;">Focus on PR, tap into BE, understand RC</div> <div> 6. CUSTOMER LIMITATIONS CL EG. BUDGET, DEVICES Limited ability to interpret large housing datasets in raw CSV or spreadsheet format. Lack of experience in creating meaningful data visualizations. Difficulty identifying trends, patterns, and relationships from numerical data. Limited access to interactive tools for visualization and dashboard creation. </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 0.8em;">Explore AS, differentiate</div> <div> 5. AVAILABLE SOLUTIONS AS PROS & CONS Spreadsheets such as Excel for basic analysis and static charts. Manual analysis using raw CSV data without visualization tools. Basic charting tools that do not support interactivity or dashboard creation. Pros: Easy access and simple to use. Cons: Limited visualization capability, no interactivity, difficult to identify trends. </div> </div>
<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 0.8em;">Identify strong TR & EM</div> <div> 3. TRIGGERS TO ACT TR Receiving housing dataset for academic or analytical projects. Requirement to present data insights clearly using dashboards. Need to understand relationships between housing features and sale price. Need to complete academic project submissions and demonstrations. 4. EMOTIONS EM BEFORE / AFTER Before: Confused and overwhelmed by large datasets. Frustrated due to difficulty understanding trends. After: Confident and satisfied after viewing interactive dashboards. Comfortable presenting insights using visual dashboards. </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 0.8em;">Focus on PR, tap into BE, understand RC</div> <div> 9. PROBLEM ROOT / CAUSE RC Housing datasets are stored in raw numerical format, which is difficult to interpret visually. Lack of proper visualization tools prevents easy identification of trends and relationships. Manual data analysis methods do not provide interactive or meaningful insights. </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 0.8em;">Focus on PR, tap into BE, understand RC</div> <div> 7. BEHAVIOR BE ITS INTENSITY Users load housing datasets into analysis tools and attempt to analyze data manually. Users create basic charts to understand patterns. Users search for better visualization tools to present their analysis clearly. Users explore dashboards and filters to understand housing trends. </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 0.8em;">Explore AS, differentiate</div> <div> 10. YOUR SOLUTION SL Use Tableau to convert raw housing data into interactive dashboards, charts, and stories. Enable users to analyze housing trends, renovation impact, and feature relationships visually. Publish dashboards to Tableau Public for easy access. Integrate dashboards into a Flask web application for demonstration and accessibility. </div> </div>
<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 0.8em;">Identify strong TR & EM</div> <div> 8. CHANNELS of BEHAVIOR CH ONLINE Tableau Public dashboard Web browser Flask web application OFFLINE Tableau Desktop software Local computer system Housing dataset stored as CSV file </div> </div>		<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 0.8em;">Explore AS, differentiate</div> <div> 11. EXTENDED SOLUTIONS AS Additional features and integrations that can be added to the solution in the future. </div> </div>	

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 Designed by Daria Nepriakhina / ideahackers.io - we tailor ideas to customer behaviour and increase solution adoption probability.

References:

<https://medium.com/@epicantus/problem-solution-fit-canvas-aa3dd59cb4fe>