Project Plan Presentation
Customer Insights Dashboard

The Capstone Experience

Team Urban Science

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Functional Specifications

• Display ratings for households on how good of an "opportunity" they are.
• Solves the problem that dealerships only have useful analysis of their competitors rather than of their customers.
• Allows for a different view of the opportunity as the sale process moves forward.
Design Specifications

• Web app that displays leads/opportunities in a table.
• Each lead has an assigned rating (Good, Better, Best).
• Information displayed changes over time with the introduction of new data.
Screen Mockup: Leads

## Leads

<table>
<thead>
<tr>
<th>ID</th>
<th>DATE</th>
<th>STATUS</th>
<th>RATING CHANGE</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>77392191</td>
<td>1/20/2022</td>
<td>OPEN</td>
<td>+9.17%</td>
<td>Best</td>
</tr>
<tr>
<td>77398282</td>
<td>1/20/2022</td>
<td>OPEN</td>
<td>+0.76%</td>
<td>Best</td>
</tr>
<tr>
<td>77421305</td>
<td>1/21/2022</td>
<td>OPEN</td>
<td>-4.68%</td>
<td>Better</td>
</tr>
<tr>
<td>77421608</td>
<td>2/1/2022</td>
<td>NEW</td>
<td>0%</td>
<td>Better</td>
</tr>
<tr>
<td>77427645</td>
<td>1/20/2022</td>
<td>OPEN</td>
<td>-2.03%</td>
<td>Better</td>
</tr>
<tr>
<td>77390873</td>
<td>1/16/2022</td>
<td>OPEN</td>
<td>+5.25%</td>
<td>Better</td>
</tr>
<tr>
<td>77317836</td>
<td>1/8/2022</td>
<td>OPEN</td>
<td>+2.35%</td>
<td>Good</td>
</tr>
<tr>
<td>77399746</td>
<td>2/1/2022</td>
<td>NEW</td>
<td>0%</td>
<td>Good</td>
</tr>
<tr>
<td>77334851</td>
<td>1/17/2022</td>
<td>OPEN</td>
<td>+2.02%</td>
<td>Good</td>
</tr>
<tr>
<td>77459832</td>
<td>1/16/2022</td>
<td>OPEN</td>
<td>-3.01%</td>
<td>Good</td>
</tr>
<tr>
<td>77393862</td>
<td>1/19/2022</td>
<td>OPEN</td>
<td>+4.89%</td>
<td>Good</td>
</tr>
</tbody>
</table>
Screen Mockup: Lead Page 1

[Image of a customer insights dashboard with information about Xayd Sorphis and why they are considered the best choice for a vehicle purchase.]
Screen Mockup: Lead Page 2
Screen Mockup: Menu Bar
Screen Mockup: Rating Overview
Technical Specifications

- Angular Web Application
- API built in .NET Framework, C#, Dapper
- MySQL Database for Urban Science Data
- MySQL Database for our processed Data
- Rating engine written in Python using NumPy, Scikit-Learn, and Pandas
System Architecture

MSU Team Urban Science

Car Dealership (End User) → Final Lead Rating Database → Rating Engine in Python

Angular Web Application with Angular Material UI → .NET Framework and Dapper for API → Raw Database

Urban Science

Automotive Lead Data
System Components

• Hardware Platforms
  ▪ Windows 10 Machines
  ▪ MSU Hosted Server through phpMyAdmin

• Software Platforms / Technologies
  ▪ Visual Studio 2019 and Visual Studio Code
  ▪ Python, NumPy, Scikit-Learn, Pandas
  ▪ .NET Framework, C#, Dapper
  ▪ MySQL
  ▪ Angular, Angular Material
Risks

• Risk 1
  ▪ Unsure which factors determine the quality of a lead.
  ▪ We will perform a statistical analysis on sample lead data to observe which variables most often occur with a sale.

• Risk 2
  ▪ Interfacing python back-end to angular front-end.
  ▪ We will have to have clear and organized data structures so that we do not have difficulty with communication.

• Risk 3
  ▪ Ensuring the system is scalable and can adapt to new data inputs.
  ▪ We will need to simulate the passage of time by processing specific sections of data, one date at a time.
Questions?