Project Plan Presentation

Dealership Parts and Telematic Insights

The Capstone Experience

Team Urban Science

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Project Sponsor Overview

- Urban Science is a global automotive consulting firm that is based in Detroit, MI
- Urban Science serves automotive Original Equipment Manufacturers (OEM) in over 70 countries
- Helps dealerships and automotive OEMs derive insights using telematic vehicle data
Project Functional Specifications

• Dealerships don’t know how to effectively use the new telematics data that cars are generating
• Our project draws insights from this data through analytical processing and visualization
• Visualize data to highlight metrics and expose trends in dealership profitability
• Display key insights to improve speed, access, and consumption of data
• Scalable, with capacity for additional data
• User roles determine data visibility
Project Design Specifications

• Web application that visualizes telematic data
• Different user roles are presented different data depending on authorization
• Interactive dealership icons that redirect user to a separate webpage with further insights on the dealership(s)
• Insights are pulled from geographical data such as automotive alerts by zip code and dealership traffic
Screen Mockup: Dealership Map
Screen Mockup: Dealership List

Telematics App

La Fontaine Data

<table>
<thead>
<tr>
<th>Vehicle Entry</th>
<th>Vehicle ID</th>
<th>Vehicle Alert Date</th>
<th>Acknowledgement Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>9369</td>
<td>6/23/21</td>
<td>7/12/21</td>
</tr>
<tr>
<td>37</td>
<td>10065</td>
<td>6/25/21</td>
<td>7/13/21</td>
</tr>
<tr>
<td>38</td>
<td>10556</td>
<td>7/15/21</td>
<td>7/23/21</td>
</tr>
<tr>
<td>39</td>
<td>10397</td>
<td>7/15/21</td>
<td>7/23/21</td>
</tr>
<tr>
<td>40</td>
<td>11489</td>
<td>7/16/21</td>
<td>7/25/21</td>
</tr>
</tbody>
</table>
Screen Mockup: User Management

![User Management Table]

<table>
<thead>
<tr>
<th>Employee #</th>
<th>Email</th>
<th>User Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>N00346</td>
<td><a href="mailto:admin@admin.com">admin@admin.com</a></td>
<td>admin</td>
</tr>
<tr>
<td>N00487</td>
<td><a href="mailto:manager@lafontaine.com">manager@lafontaine.com</a></td>
<td>regional manager</td>
</tr>
<tr>
<td>N00962</td>
<td><a href="mailto:jon.software@elder.net">jon.software@elder.net</a></td>
<td>dealer</td>
</tr>
<tr>
<td>N00218</td>
<td><a href="mailto:district.owner@gmail.com">district.owner@gmail.com</a></td>
<td>regional manager</td>
</tr>
<tr>
<td>N00856</td>
<td><a href="mailto:jake.sales@lafontaine.com">jake.sales@lafontaine.com</a></td>
<td>dealer</td>
</tr>
</tbody>
</table>

Rows per page: 5
Screen Mockup: Document Upload

Drag and drop the file(s) here or click on “Browse Files”

Quarter4_telemetrics.csv

BROWSE FILES
Project Technical Specifications

• Backend
  ▪ C# .NET
  ▪ SQL Server

• Frontend
  ▪ Angular - JavaScript Framework
  ▪ HTML
  ▪ CSS
  ▪ TypeScript

• Other
  ▪ Git
  ▪ Visual Studio
  ▪ Visual Studio Code
Project System Architecture
Project System Components

• Hardware Platforms
  ▪ Google Cloud
  ▪ Local Dedicated Server

• Software Platforms / Technologies
  ▪ SQL Server
  ▪ Git
    ▪ Infragistics Angular UI Development Tools for Visualization
Project Risks

• Selection of Data and Methods for Visualization
  ▪ Determine what data is important and how to display it
  ▪ Mitigation: Rank each data type and confirm important data with client

• Business Layer Data Processing Methods
  ▪ Team is inexperienced with creating business layers on web applications
  ▪ Mitigation: Discuss possible architecture designs for business layer with client

• Properly Exposing Business Layer Backend APIs
  ▪ Deploy backend APIs so that telematic data can be displayed on the front end
  ▪ Mitigation: Performance test backend. Emphasize unit tests and integration tests

• SQL Server Setup
  ▪ Keep the local server running reliably with SQL Server
  ▪ Mitigation: Stress test the local server and have a backup server for emergencies
Questions?