

MICHIGAN STATE

UNIVERSITY

Beta Presentation

Predicting Automotive Sales Using Generative AI

The Capstone Experience

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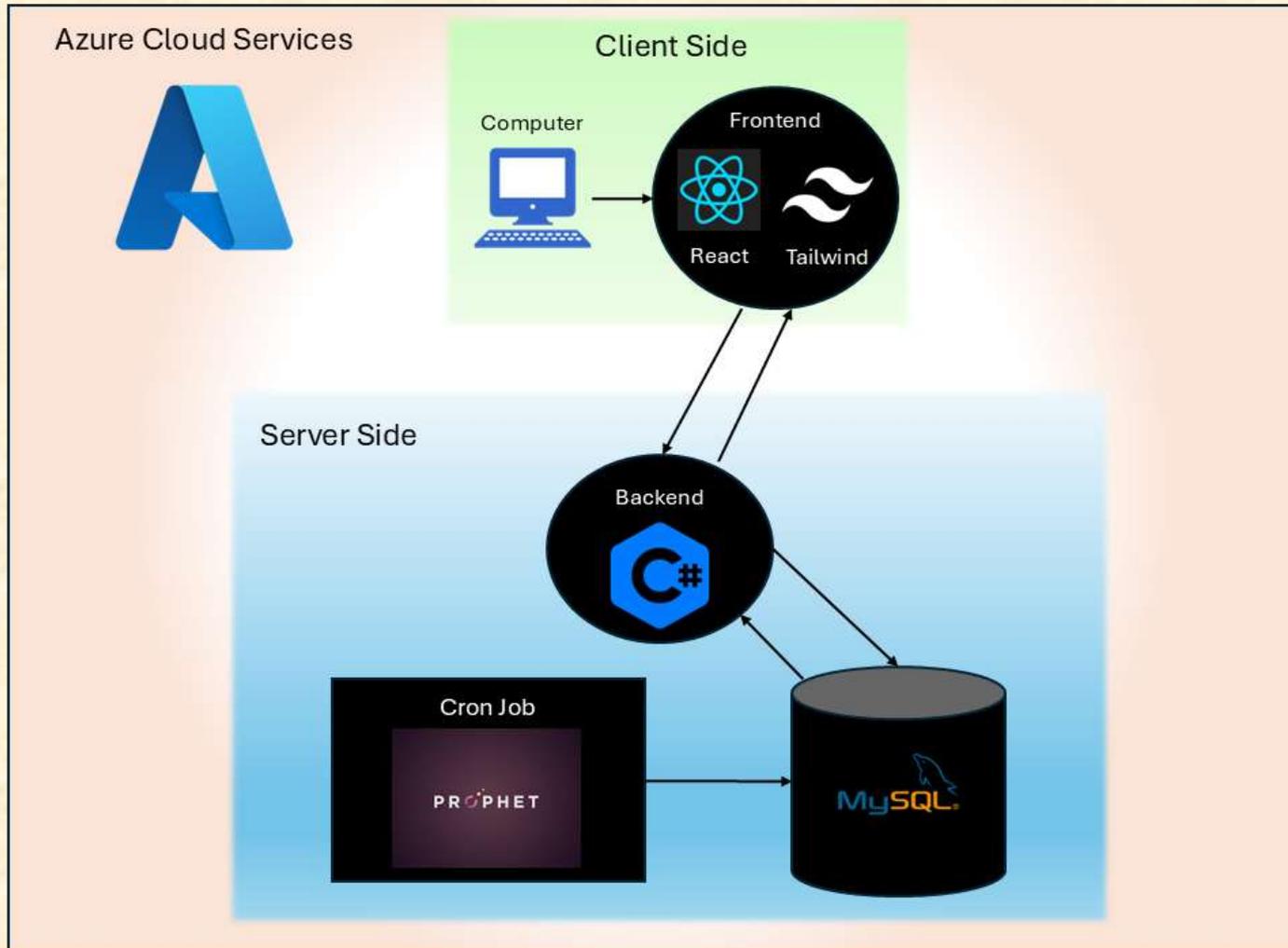
*From Students...
...to Professionals*

Project Overview

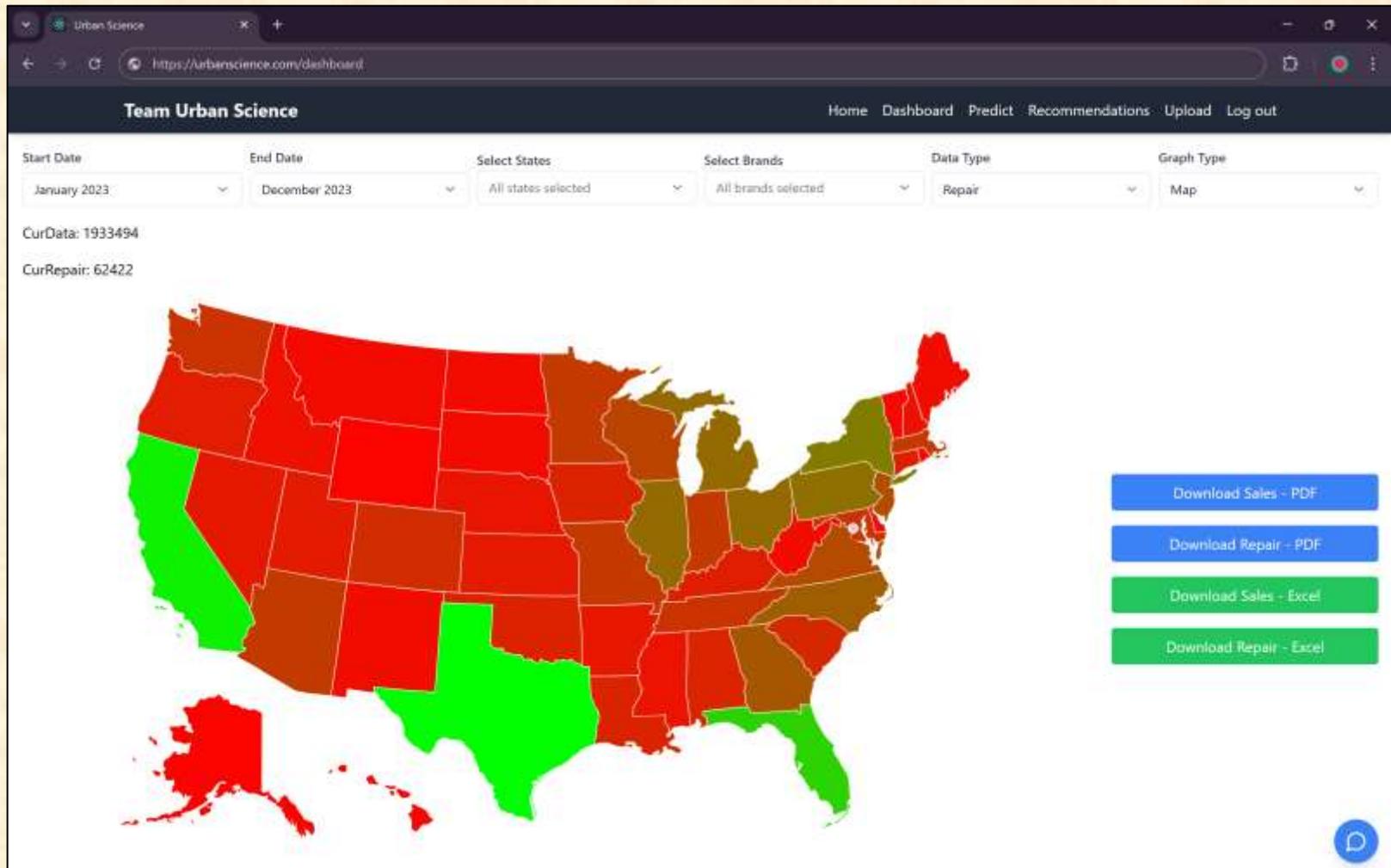
- Web Application Displaying Unique Data For Automotive Dealers In Graph Form
 - Bar/Line/Pie Charts And A Heat Map
- Provides Human Interface For Sales and Repair Order Data Through AI Chat Bot
- Provides Predictive Data and Recommendations For Specific Car Brands
- Includes a Tutorial on How to Navigate the Web Application



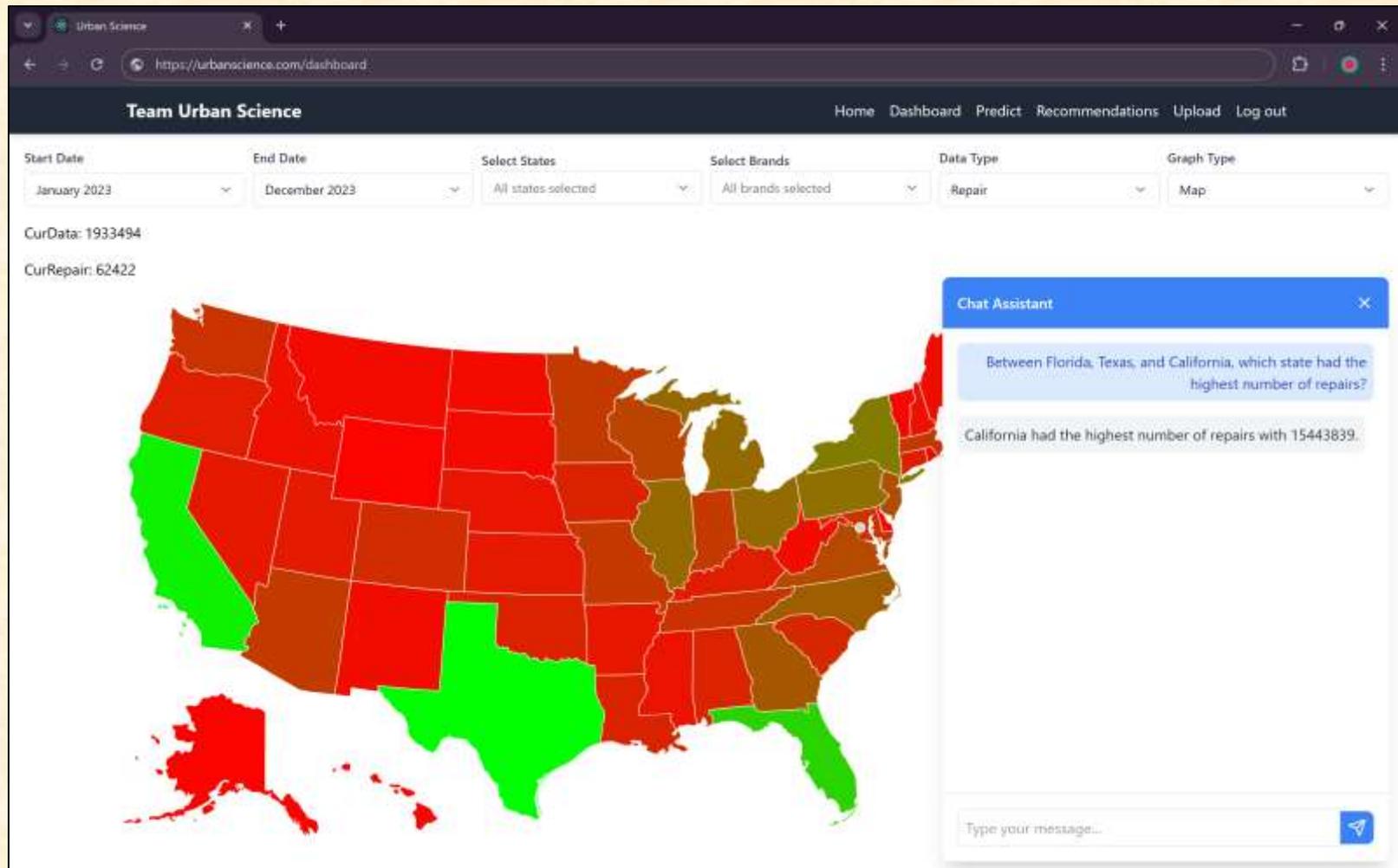
System Architecture



Dashboard Page - Heatmap



Dashboard Page - Chatbot



Recommendations Page

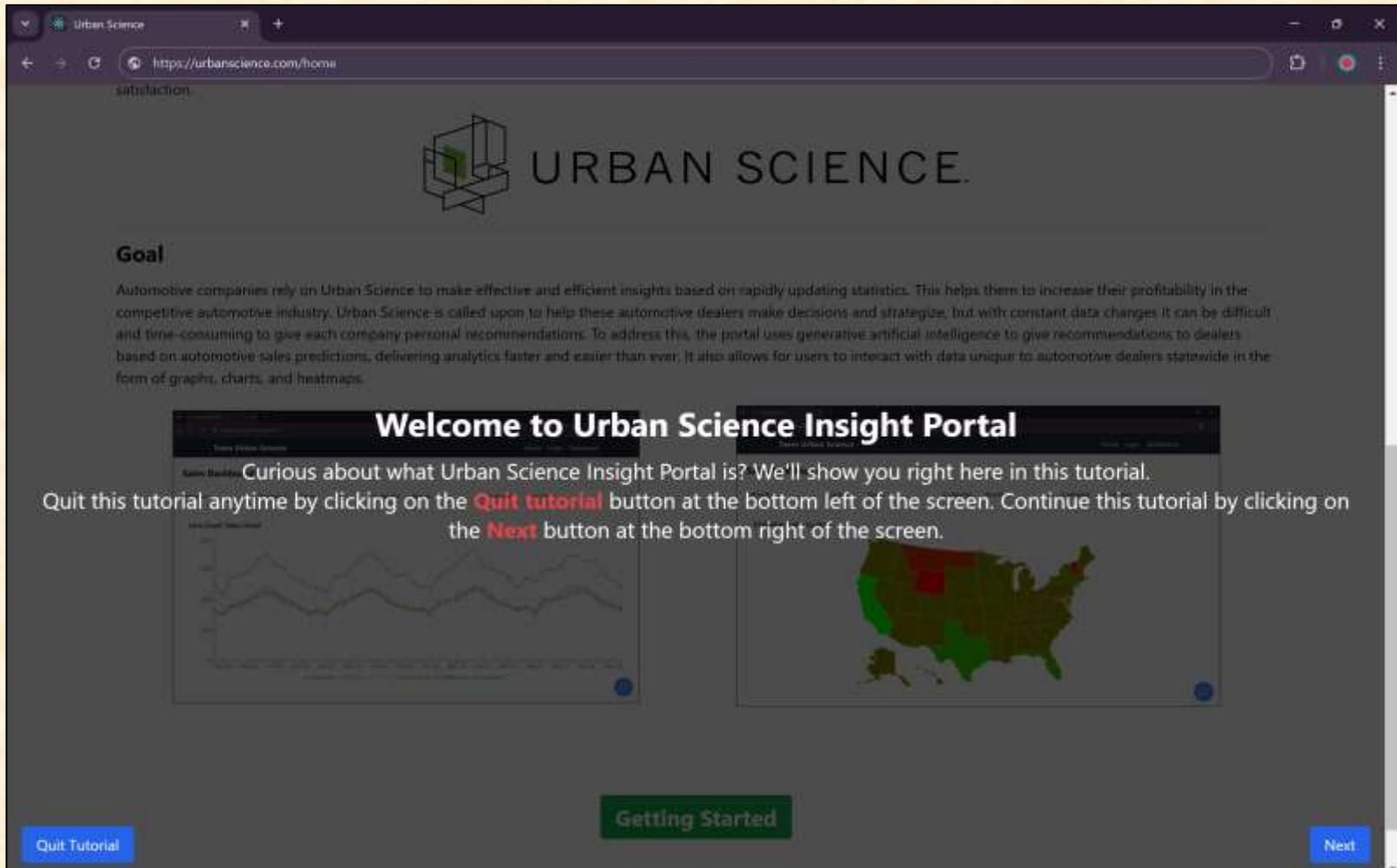
The screenshot displays a web browser window with the URL <https://urbanscience.com/recommend>. The page is titled "Brand Recommendations" and includes a sub-header: "Review the latest performance metrics and recommendations for automotive brands across different states." A "Select Brand" dropdown menu is set to "BMW".

The page is divided into two sections:

- Strong Performance:** This section features three light green cards, each with a green upward arrow icon. Each card represents BMW in a different state, showing a significant increase in performance over the last month and a recommendation to continue support.
 - WY:** BMW has experienced a 250% increase in the last month! Recommendation: Continue support in WY.
 - MT:** BMW has experienced a 58.33% increase in the last month! Recommendation: Continue support in MT.
 - OR:** BMW has experienced a 48.36% increase in the last month! Recommendation: Continue support in OR.
- Needs Attention:** This section features three light red cards, each with a red downward arrow icon. Each card represents BMW in a different state, showing a decrease in performance over the last month and a recommendation to consider cutting support.
 - OH:** BMW has experienced a 3.25% decrease in the last month. Recommendation: Consider cutting support in OH.
 - MS:** BMW has experienced a 3.53% decrease in the last month. Recommendation: Consider cutting support in MS.
 - VA:** BMW has experienced a 4.55% decrease in the last month. Recommendation: Consider cutting support in VA.



Home Page - Tutorial



The screenshot shows a web browser window displaying the Urban Science website. The URL is <https://urbanscience.com/home>. The page features the Urban Science logo, which consists of a stylized 3D wireframe cube with a green square inside, followed by the text "URBAN SCIENCE." Below the logo, there is a section titled "Goal" with a paragraph of text. A large, semi-transparent tutorial overlay is positioned in the center of the page. The overlay has a dark background and contains the following text: "Welcome to Urban Science Insight Portal", "Curious about what Urban Science Insight Portal is? We'll show you right here in this tutorial.", "Quit this tutorial anytime by clicking on the **Quit tutorial** button at the bottom left of the screen. Continue this tutorial by clicking on the **Next** button at the bottom right of the screen.", and "Getting Started". At the bottom of the overlay, there are three buttons: "Quit Tutorial" (blue), "Getting Started" (green), and "Next" (blue). The background of the website is dark gray, and the text is white.

satisfaction.



URBAN SCIENCE.

Goal

Automotive companies rely on Urban Science to make effective and efficient insights based on rapidly updating statistics. This helps them to increase their profitability in the competitive automotive industry. Urban Science is called upon to help these automotive dealers make decisions and strategize, but with constant data changes it can be difficult and time-consuming to give each company personal recommendations. To address this, the portal uses generative artificial intelligence to give recommendations to dealers based on automotive sales predictions, delivering analytics faster and easier than ever. It also allows for users to interact with data unique to automotive dealers statewide in the form of graphs, charts, and heatmaps.

Welcome to Urban Science Insight Portal

Curious about what Urban Science Insight Portal is? We'll show you right here in this tutorial.

Quit this tutorial anytime by clicking on the **Quit tutorial** button at the bottom left of the screen. Continue this tutorial by clicking on the **Next** button at the bottom right of the screen.

Getting Started

Quit Tutorial

Next



What's left to do?

- Features
- Stretch Goals
 - Adding Suggestion Prompts to Chat Bot
 - Have Chat Bot Compare Data
 - Tutorial Page Opens Immediately for First Time Log On
- Other Tasks
 - Improve Website Loading Times
 - Change Verbiage on Recommendations for Top Decreases



Questions?

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