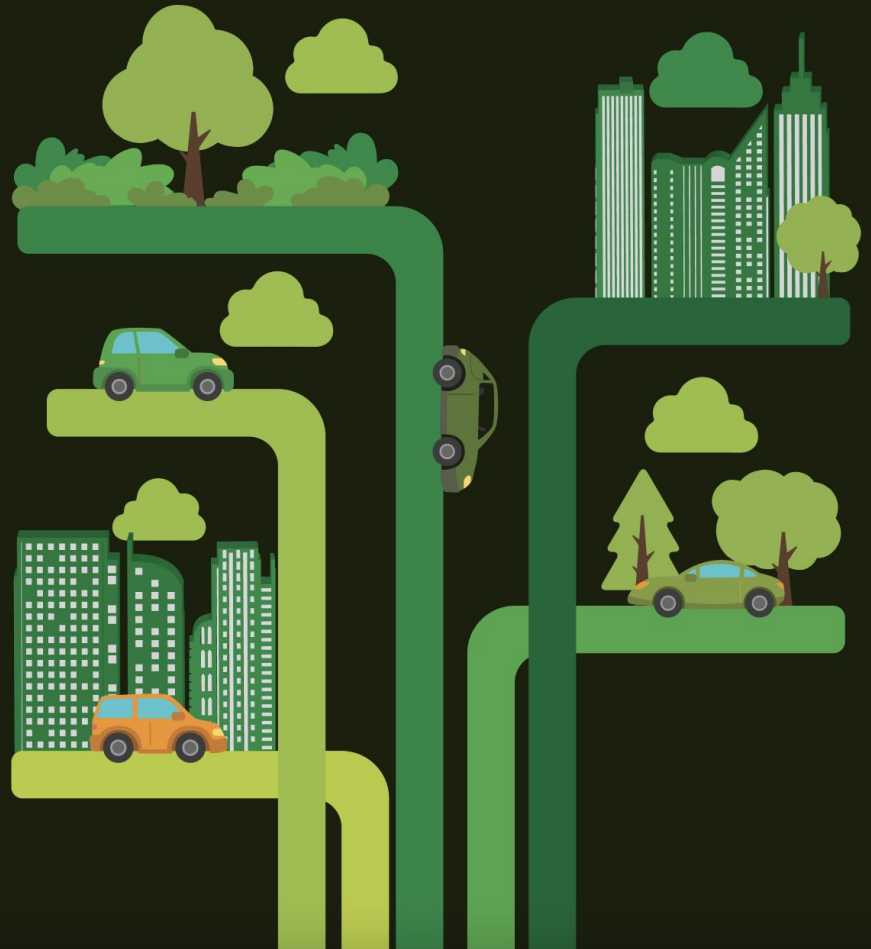




ECO
MOTIVE





Project and Team Introduction

EcoMotive



Stephanie Wang



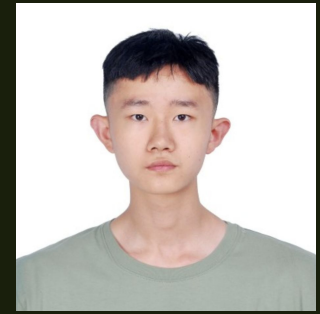
Arianna Khan



Taylor Russon



Jackie Chen



Weifan Wu



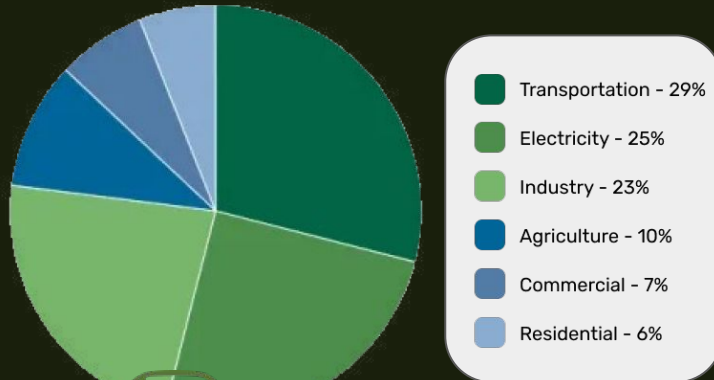


Problem context

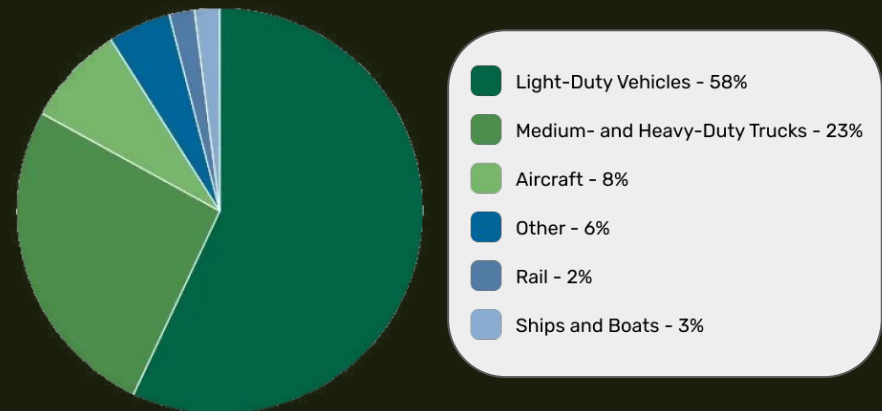
CO2 emissions are increasing in cities around the world.

- “**Cities** occupy just 3% of the Earth’s land, but **account for 75% of carbon emissions**” (UN SDG)
- “Greenhouse gas (GHG) emissions from **transportation** account for about 29% of total U.S. greenhouse gas emissions, making it the **largest contributor of U.S. GHG emissions**” (US EPA)

2021 U.S. GHG Emissions by Sector



2021 U.S. Transportation Sector GHG Emissions by Source





Problem Statement

How might car buyers achieve greater engagement with sustainable transportation vehicles so that they can contribute to a more sustainable environment by reducing CO2 emissions?





Key research insights

- **Market Research and Literature Review**
 - Projected market for PHEV expected to increase
 - (CAGR of 9.4% from 2023-2032)
 - TCO is lower for EVs and Hybrids compared to Gas Cars
- **User Research**
 - People are interested in purchasing EVs or Hybrid cars
 - Over **80% of respondents** were open to purchasing an EV
 - Biggest barriers to purchase:
 - Initial cost
 - Range anxiety
- **Our Plan**
 - Address barriers with solution by including a 'Learn' section



User Personas



Jordan Williams - 23 y/o Marketing Coordinator



Goal: Find an EV that suits daily city commuting and long-distance trips while addressing range anxiety concerns.

Needs:

- Access information about driving range of EVs.
- A straightforward method to compare features of EVs.

Pain points:

- Limited understanding of CO2 implications.
- Overwhelmed by the vast info related to 'green' vehicles.
- Uncertain about the reliability of available information.



User Personas



Emily Shrader - 43 y/o Environmental Science Teacher



Goal: Purchase an EV aligned with her values for daily commuting and family use.

Needs:

- Reliable information on CO2 emissions for EVs.
- Tools for considering environmental impact & budget.
- User-friendly platform for understanding car emissions and learning EV basics.

Pain points:

- Balancing environmental impact with personal needs.
- Difficult finding basic introductory information about EVs, hindering the initial exploration of electric vehicles.





Key Concepts

- **Key concepts**
 - Informing users about sustainable transportation
 - Helping users make informed decisions about EVs
 - Most users want to switch to EVs but cannot without proper information
- **Important to our users** because car buyers want to be cost effective and efficient with their time and money





Concept Validation

- **What we tested**
 - If users found our web app and features helpful in making sustainable decisions
- **Testing insights**
 - Pre-existing knowledge & assumptions of EVs
 - Common assumptions: EVs are environmentally friendly
 - Common concerns: Range anxiety, cost
- **Design direction derived from validation**
 - Debunking myths, informing, and onboarding users through an educational approach
 - Be more informative on the exact impact of switching to EVs

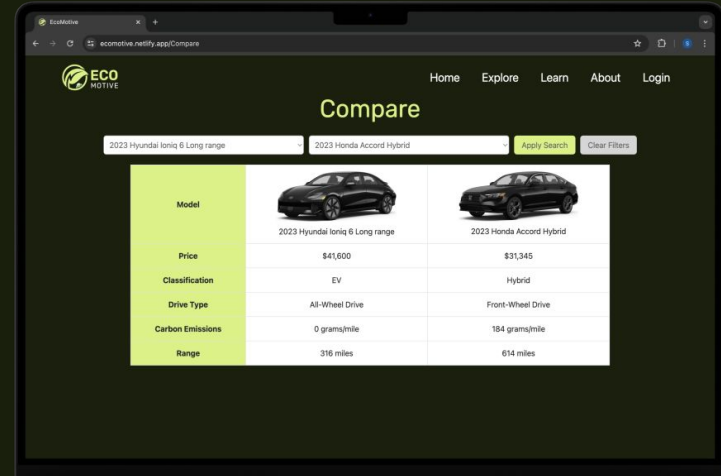
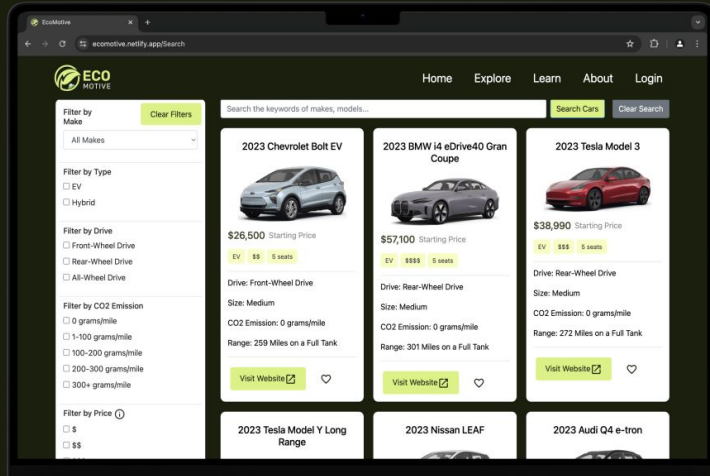




Key Features: Explore

Search and Filter | Compare

- Multiple filters (e.g. Make, Model, Year, Drive, Price)
- Compare two cars by multiple features + users can save cars to profile

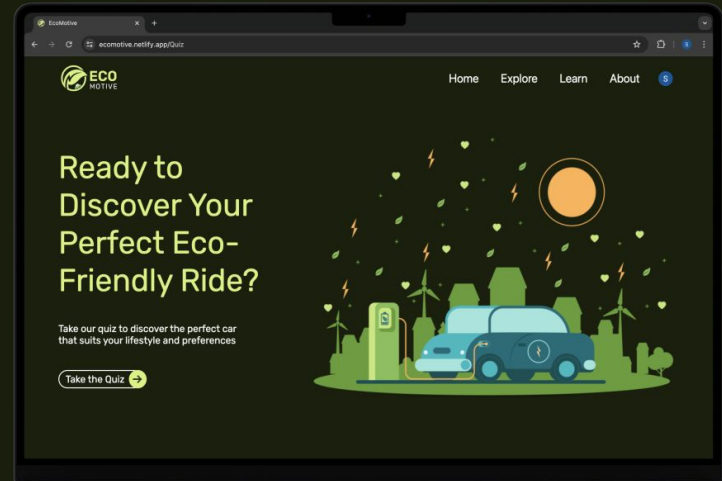
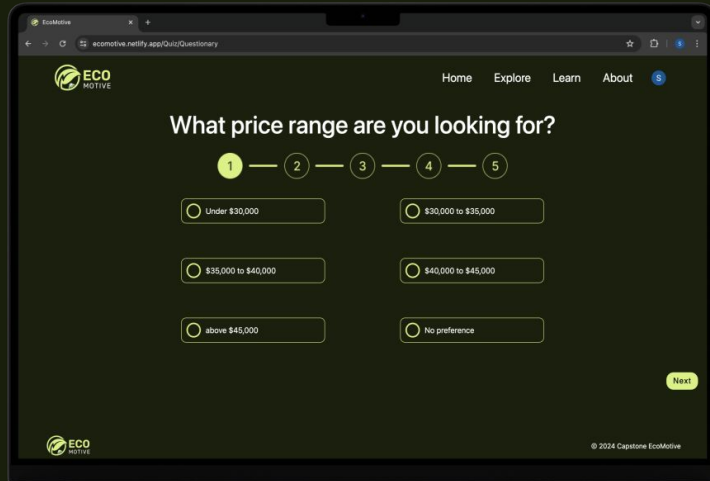




Key Features: Explore

Quiz

- Personalized quiz results based off user's answers
- Revised questions to focus more on personal preferences
- Revised button format

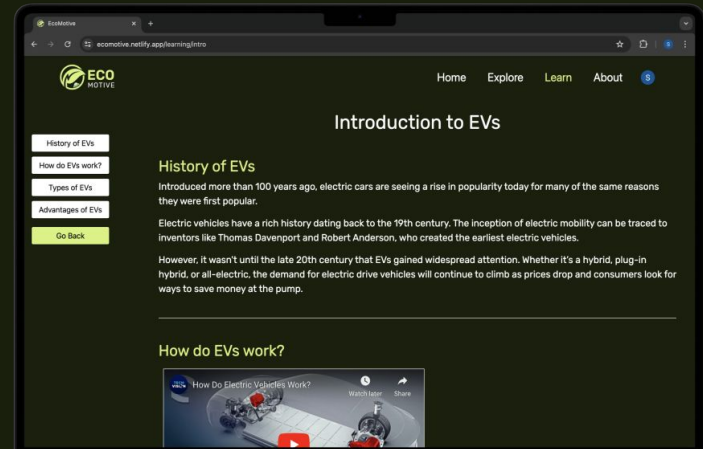
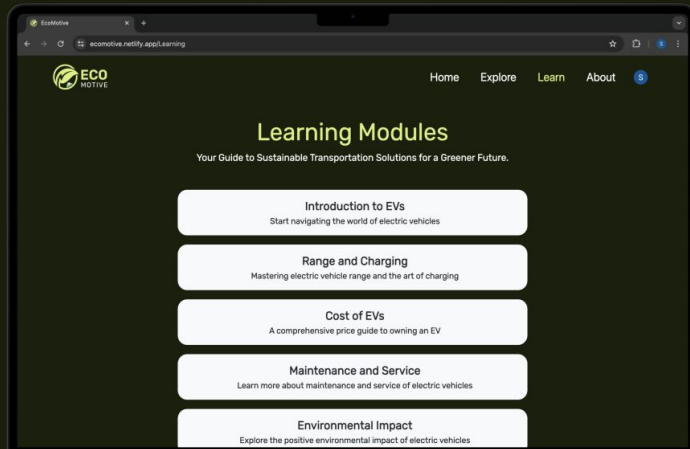




Key Features: Learn

Learning Modules

- Designed to be a personal guide to users about EV knowledge
 - Topics include cost, charging, environmental impact, and maintenance
- Side menu for sections, curated content (infographics + videos)





Ethical Considerations

Values:

- Sustainability
 - Reducing carbon emissions
- Empowering individuals
 - Allowing users to make informed decisions

Concerns:

- Misinformation/Disinformation
 - Lots of misinformation around EVs
 - Fact check all of our sources





Next Steps Beyond Capstone

Since we are not continuing this project after capstone, we are taking steps to responsibly close out the project workspace.





Thank you and go green!