**EcoCAR3 Year 3**

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**BACKGROUND:**
EcoCar3 is the latest Advanced Vehicle Technology Competition (AVTC), hosted by General Motors (GM) and the U.S. Department of Energy (DOE). The main goal of the project is to convert a Chevy Camaro into a plug-in electric hybrid to reduce its impact on the environment. The competition takes place over four years and involves teams from multiple departments: Electrical Engineering, Mechanical Engineering, and Computer Science. The computer science team will be responsible for working on the features of the touchscreen center console unit. Through a UI, it will allow the user to access a simulated police database, open a web browser that will give them access to the GIS navigation system, monitor the status of the car, and provide controls for systems in the car. This year, we will be refining and iterating on the progress of last year's team. Some possible changes include re-designing the UI layout and visuals, expanding functionality, and depending on overall progress, live testing in a car.

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**OBJECTIVES:**
- Geographic Information System (GIS) that is responsible for replacing all of the GPS functionality in the display.
- Police Database to provide all law enforcement related information
- Graphical User Interface (GUI) that allows the officers to view the database, GIS, and information such as; battery level, temperature, and time. Has access to radio and sirens.

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**GRAPHICAL USER INTERFACE (GUI) DESIGN**

**Main Display**
- Police Database Form
- Geographic Information System (GIS)

**TOOLS/SOFTWARE**

**CONCLUSION**
EcoCar3 Year 3 team designed and developed the User Interface (UI), which is ready to be implemented and integrated into the vehicle. In addition, the Year 3 team restructured and modularized the code for any future additions to be made easily. Finally, Year 3 successfully deployed the software onto the touchscreen and verified that the software is fully functional on the touchscreen.