Bot Connection

A button to connect the dashboard to the bot.
Control is via an external PS4 controller (not dashboard buttons).

Sensor Data

Ultrasonic Sensors

Visualized in 2D(simulation).*(2d models will be provided)*
Ultrasonic sensor feedback is shown as arcs or "buzzes" around the bot in real time.

MQ-9 Gas Sensor

Detects Carbon Monoxide, Methane, and LPG levels.
Display live readings + individual graphs.
Display level as colored bars indicating concentration

MQ-135 Gas Sensor

Detects general air quality.
Display live readings + individual graphs.
Display level as colored bars indicating concentration

Cameras

Normal camera feed.
Thermal camera feed.

GPS + Map

Real-time map with the bot's GPS location (dot marker).
Ability to select a point on the map and choose options: "Inspect" or "Go-To."

Console

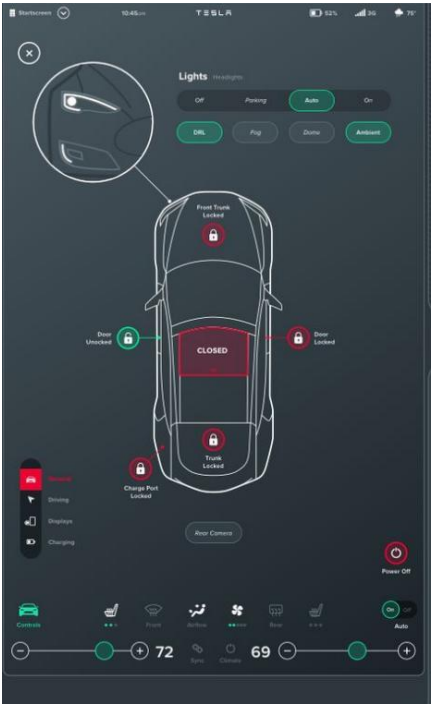A console on the dashboard for sending custom commands to the bot.
(commands will be given as a list).

Data Logging

All sensor readings and GPS logs stored locally.
Later backed up to the cloud.

Ultrasonic sensor data

map

Camera feed

terminal