**“V2C” Vehicle to Cloud**

The idea is to create a smart car that combines automotive development with modern technology, in this project, we are using V2C “vehicle to cloud” technology to

monitor and control our cars.

**Details:**

A diagram of a computer

Description automatically generatedOur project has a main feature which is the ability to connect each car to the cloud, each car can be represented as a node, and inside each node we have a main processor that sends data from the car to the cloud and vice versa, also main processor connects to other ECUs used inside the car, we can consider each ECU as an ADAS system like collision detection or adaptive cruise control or any other technology, all of these ECUs can communicate via CAN bus and transfer data to the main controller, which sends data to the cloud, now we have the car data in the cloud we can control and monitor it via mobile or web application.

Used components:

* For the main controller we have
  + respiratory
  + Raspberry touch LCD
  + MCP2515 CAN-BUS Controller and Transceiver Module Cellular flash drive
* In the ADAS controllers we have:
  + STM 32 F401:
    - ultra-Sonic sensors: park assistance.
    - IR sensor: Lane control
  + ATMEGA 32:
    - temperature sensor: engine temperature
    - light sensor: auto head and tail lights on