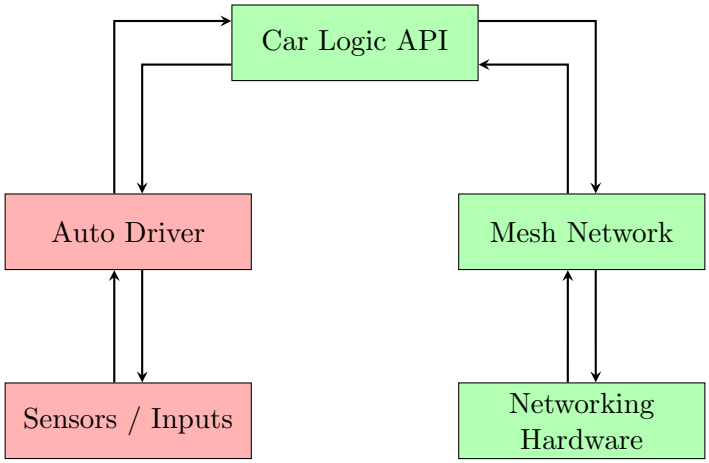
Car Logic Implementation



1. Hardware sensors: These are various data collection tools installed on the car, like compass, cameras, lidar and sonar, accelerometers, and any other sensors. The inputs are things like the braking, acceleration, steering, and lights.

2. Autonomous driver: This manufacturer specific implementation is the interpretation of the raw input into abstract descriptions, such as lane position, position of other cars, and current direction and route. Also in this block would be the code to control the car, such as how to maintain a lane, how to set a speed, how to shift a lane. Also it should have safety checks, like preventing collisions, avoiding objects, and limiting turning speed. These parts are already in self-driving cars. They will also need to add the calls to the Car Logic API, and decide what to do with that data and whether to follow the suggestions.

3. Car Logic API: The goal of this project. The idea here is to create a shared library that all manufacturers can implement parts of, and so that the cars on the road can collaborate, whether or not they are the same model, manufacturer, or even whether or not they are self-driving cars. The goal here is to make it standard, and modular, so that the choice of how to implement and how much to implement, is left up to the manufacturer, that way they can make luxury models, budget models, improve, expand, and all while still being able to communicate with other cars on the road.

4. Mesh Network: This software allows the cars to form a mesh network, so that messages from any car can get to any other car in the mesh network. Most of the uses will be to transmit to cars immediately around the source, so long communication routes would be rare.

5. Network hardware: This equipment allows for the transmission and reception of packets on some radio signal range. Targets include other cars, but also intelligent installations such as "caches" of accumulated data, traffic signals, repeaters, or smart road sections. Cars could use IEEE 802.11p / IEEE 1609 WAVE or other forms of wireless communication.