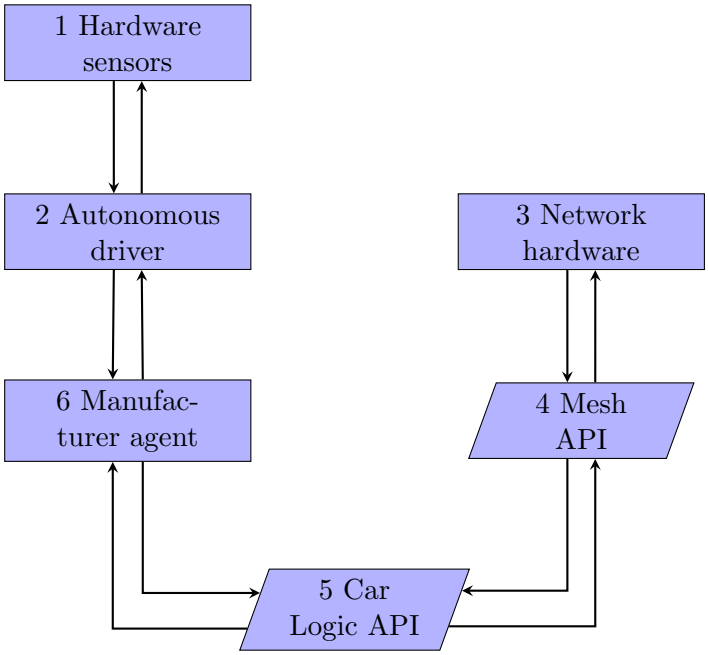
Car Logic Implementation



1. Hardware sensors: These are various data collection tools installed on the car, like compass, cameras, lidar and sonic sensors, accelerometers, and any other "raw" input signal.

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 saftey checks, like preventing collisions, avoiding objects, and limiting turning speed.

3. Network hardware: This equipment allows for the transmition and reception of packets on some radio signal range. Targets include other cars, but also inteligent installations such as "caches" of accumulated data, traffic signals, repeaters, or smart road sections.

4. Mesh API: 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 a multitute of jumps would be rare.

5. Car Logic API: The goal of this project. The idea here is to create a shared library that all manufacturers can implement how they choose, and so that the maximum colaberation can be had from cars on the road, whether or not they are the same model, manufacturer, or even whether or not they are smart 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 manufactuter, 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.

6. Manufacturer implemenation: This would be the very last part of this stack to be developed. It would be the client of all other blocks in the diagram. This is where the creativity of the manufacturer shines. Car Logic API provides the manufacturer the toolset and standardization to do what they couldn't do before, to create a car that can collaborate with other manufacturer's cars.