Advanced sensors in the automobile industry play a crucial role in enhancing vehicle performance, safety, and efficiency. Radar Sensors: Radar technology is used for adaptive cruise control and collision avoidance systems. Tire Pressure Monitoring Systems (TPMS): These sensors monitor the air pressure in tires, alerting drivers to under–inflation, which can enhance safety and fuel efficiency. Overall, the integration of these advanced sensors contributes to smarter, safer, and more efficient vehicles in the automotive industry. Engine Control Unit (ECU) Sensors: Various sensors monitor engine parameters such as temperature, pressure, and airflow, optimizing performance and emissions. 2.3.4.5.6.