A MACHINE LEARNING BASED VEHICLE'S PERFORMANCE ANALYSER

ProblemStatement:-

Vehicle performance is the study of the motion of a vehicle. The motion of any vehicle depends upon all the forces and moments that act upon it. These forces and moments, for the most part are caused by interaction of the vehicle with the surrounding medium(s) such as air or water (e.g. fluid static and dynamic forces), gravitational attraction (gravity forces), Earth's surface (support, ground, or landing gear forces), and on-board energy consuming devices such as rocket, turbojet, piston engine and propellers (propulsion forces). Consequently, in order to fully understand the performance problem, it is necessary to study and, in some way, characterize these interacting forces.

Generally speaking, the performance of a vehicle can be evaluated using following indicators: the maximal speed that can be reached, the accelerating time from zero to a certain speed, the maximal climbing angle, the mileage in a certain condition and the hydrogen consumption in a specific cycle.

Approach:-

- Potentially get high-quality coilovers or lowering springs with adjustable inserts. They'll improve your handling but degrade ride quality, so be careful.
- Buy high-quality components from reputable dealers.
- Install a cold-air intake on turbocharged engines. They can gain a much better boost from this, and typically have programmable ECU's to actually account for the gain.
- Buy high-quality tires. The best suspension and wheel setup in the world is nothing without a high quality set of tires. I'd say do this first.
- Educate yourself. The fastest car in the world is nothing but smeared paste without a competent driver behind the wheel.

Benefits:-

- Increase the overall performance of a vehicle is increased efficiently.
- The maintenance costs of vehicles are reduced.