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CS301

CS301 Project: Individual Contribution

For the first stage of this project, I gathered the data from the Dynomite website (found at http://www.primaryboost.com/3s/dynocharts/). I scraped the data in JSON format (the horsepower and torque lists, i.e. lists of peoples' runs, with the mods used for their runs) for the project. This data was then approved for use in our project. I uploaded the data to a github repo, https://github.com/flexadecimal/cs301-project, so that we would all have access to it.

Our group recently got together and discussed the data and questions. I was most familiar with what horsepower/torque curves mean, so I introduced the other team members to what these mean, so that we would be able to formulate good questions. Our group eventually came up with three questions, relating to which car would be best for a 1/8 mile drag race, which fuel type provides the most power for the money, and then which turbo of the 10 most popular turbos has the least lag. I was able to explain to my group what a turbocharger is and what turbo lag is – and how you could look at a horsepower graph to determine what the lag is.

As an aside, a turbo pushes more air into the engine, so that the ECU can dump in more fuel, and provide more power. There is a lag between pushing the gas pedal and getting the power, which is turbo lag – a big spike in a horsepower graph is indicative of turbo lag, so we would be able to tell which turbos have the most lag by taking finite derivatives. We have to take derivatives on points rather than continuous functions because we are given sets of points rather than continuous functions.