COMS 6998: Machine Learning & Climate
Final Paper

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1 Cost

The cost of a HEV's and PHEV's are much lower than that of a BEV. A report from Consumer Reports claimed that the majority of HEV's cost between $22,000 to 30,000$. Another report from Forbes claimed that the majority of PHEV's cost between $26,000 to $40,000. For BEV's, a report from Electrik claims that the average price of a BEV is $66,000. This is a huge difference in price, and it is a major factor in why HEV's and PHEV's are still in the competition of the market. The reason for this is because the battery of a BEV is much more expensive than that of a HEV and PHEV. The average price of the battery of a BEV can range from $4,000-$20,000, while the average price of a hybrid battery of a HEV and PHEV is around $2,000-$8,000.

2 Performance

When measuring performance, we can talk about the acceleration, top speed, and range of the vehicle. The acceleration of a HEV and PHEV is much slower than that of a BEV. The concept behind this is that due to BEV's being fully electric, they get maximum torque instantly. Whether from 0 mph or 60 mph, they will have instant maximum acceleration. The acceleration of a PHEV is around 0-60 mph in 7.5 seconds, while the acceleration of a BEV is around 0-60 mph in 5.5 seconds. The top speed of a PHEV is around 100 mph, while the top speed of a BEV is around 150 mph. The range of a PHEV is around 30 miles, while the range of a BEV is around 200 miles. The reason for this is because the battery of a PHEV is much smaller than the battery of a BEV, and the battery of a BEV is much more efficient than the battery of a PHEV.

3 Environmental Impact

When measuring the environmental impact of a vehicle, we can talk about the emissions, energy consumption, and the amount of waste produced. The emissions of a HEV and PHEV are much lower than that of a BEV. The emissions of a PHEV are around 0.5 grams of CO2 per mile, while the emissions of a BEV are around 0.3 grams of CO2 per mile. The reason for this is because the battery of a PHEV is much smaller than the battery of a BEV, and the battery of a BEV is much more efficient than the battery of a PHEV. The energy consumption of a HEV

and PHEV are much lower than that of a BEV. The energy consumption of a PHEV is around 0.5 kWh per mile, while the energy consumption of a BEV is around 0.3 kWh per mile. The reason for this is because the battery of a PHEV is much smaller than the battery of a BEV, and the battery of a BEV is much more efficient than the battery of a PHEV. The amount of waste produced by a HEV and PHEV are much lower than that of a BEV. The amount of waste produced by a PHEV is around 0.5 pounds per mile, while the amount of waste produced by a BEV is around 0.3 pounds per mile. The reason for this is because the battery of a PHEV is much smaller than the battery of a BEV, and the battery of a BEV is much more efficient than the battery of a PHEV.