Module 10: Unsupervised Learning

Case Study – 1

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Domain – Automotive

focus – Incentivize drivers

Business challenge/requirement
Lithionpower is the largest provider of electric vehicle(e-vehicle) batteries. It provides battery on a rental model to e-vehicle drivers. Drivers rent battery typically for a day and then replace it with a charged battery from the company.

Lithionpower has a variable pricing model based on the driver's driving history. As the life of a battery depends on factors such as overspeeding, distance driving per day, etc.

You as an ML expert have to create a cluster model where drivers can be grouped based on the driving data.

Key issues
Drivers will be incentivized based on the cluster, so grouping has to be accurate

Considerations
NONE

Data volume
- 4000 records – file driver-data.csv

Fields in Data

- id: Unique Id of the driver
- mean_dist_day: Mean distance driven by driver per day
- mean_over_speed_perc: Mean percentage of time a driver was > 5 mph over the speed limit

Additional information
- NA

Business benefits
Increase in profits, up to 15-20% as drivers with poor history will be charged more