ARIA
APPLIED RESEARCH IN ACTION

Automatic Detection of Service Center Locations from Vehicle Data

Clustering a large number of vehicle maintenance events and applying an anomaly detection model to detect service centers.

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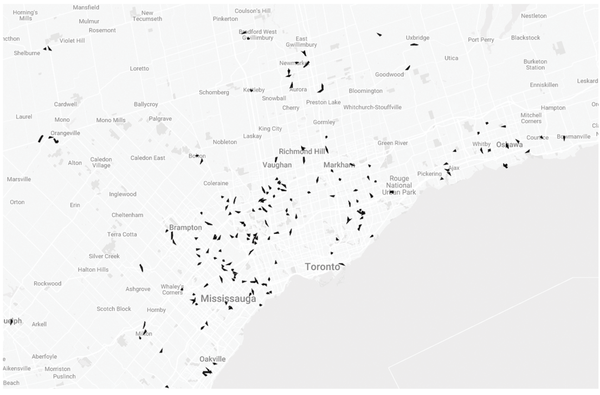

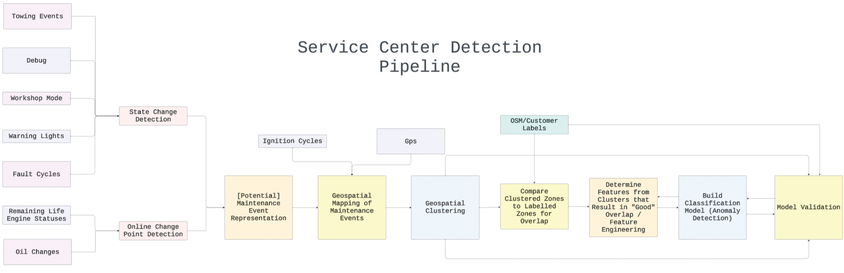

PROJECT SUMMARY

The goal of this project is to automatically detect service center locations using Geotab's existing database of data from 3 million connected vehicles. These vehicles, which are primarily trucks, report a wide range of information, including location, speed, engine status, fault codes, etc. We geographically cluster relevant signals which are indicative of potential maintenance events, such as oil changes and battery changes. We then compare these clusters against a ground truth service center dataset and build an anomaly detection model to classify whether or not the identified clusters are indeed service centers. Early results are promising, and the anomaly detection method allows us to detect new service centers and remove ones that have closed, without being dependent on external data. Being able to automatically detect maintenance centers provides a basis for Geotab's various ongoing projects. Further extensions include adding more sophisticated derived signals, such as towing events, to detect service centers quickly and more accurately.

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