**Machine Learning**

**ProPredictors**

**Project 10: Lane detection by clustering tracks pNEUMA**

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**Week 1**

**Project Overview:**

The Lane Detection by Clustering Tracks pNEUMA project seeks to address the issues caused by faded lane markings in aerial images. To avoid this issue, this project aims to effectively detect and delineate lanes by using retrieved vehicle trajectories from a multi-lane roundabout.

Progress:

This week, we delved into the project's problem statement, beginning by studying the paper "Lane Detection in Aerial Imagery Using Vehicle Trajectories" (Reference: <https://journals.sagepub.com/doi/abs/10.1177/0361198120920627>).

Subsequently, we acquired and reviewed the Pneuma dataset from [open-traffic.epfl.ch](http://open-traffic.epfl.ch).

We also gain some insight into how to preprocess this data from an article

(Reference: <https://medium.com/@abdimussa87/creating-a-data-engineering-pipeline-for-the-pneuma-dataset-f872b4fa2b26>)

Our exploration extended to understanding Jenks's Optimization method as employed in the referenced paper.

Additionally, we identified various clustering algorithms for further examination. This comprehensive approach allowed us to gain a deeper understanding of the project's context and possible implementations.