Ahmedabad University

Weekly Report 2

Group : MLcops

Course: Machine Learning

Instructor: Prof. Mehul Raval

Project: Classification of Drivers Based on Driving Patterns

Group Members

Roll Number	Name
AU2140164	Deeprajsinh Gohil
AU2140111	Raiyan Diwan
AU2140101	Tejas Pansuriya
AU2140186	Vats Patel

Objective: This week we focused on understanding the problem statement and initial brainstorming of potential solutions.

Key Points:

- The project aims to classify drivers based on their driving patterns using machine learning techniques.
- The data (as per the literature review) consists of variable-length time series representing various driving behaviors.
- The goal is to develop a multi-class classifier that can predict the risk associated with each driver's pattern.

Initial Thoughts:

- **Data Exploration:** What features are included in the driving patterns data? How does the risk associated with driving behavior get calculated?
- **Feature Engineering:** Can additional features be derived from the existing data to improve classification accuracy?
- **Model Selection:** What type of machine learning models are suitable for variable-length time series data?
- **Evaluation Metrics:** How will the performance of the classifier be measured? (e.g., Accuracy, Precision, Recall, F1-score)

Next Steps:

- Deep dive to find and explore data and understand its structure and characteristics.
- Research relevant machine learning models for time series classification.
- Identify potential challenges and formulate a plan to address them.

Deliverables for next week:

- A summary of the data exploration findings.
- A preliminary analysis of potential machine learning models for this task.

Overall:

This is a starting point for understanding the problem and outlines the initial steps for further investigation. As we progress through the project, we will refine our approach and delve deeper into the technical aspects of model development and evaluation.