



Ahmedabad
University

CSE-523 Machine Learning

Weekly Report-4

Project Title : Use fuzzy logic to find direction of motion of a vehicle.

Submitted to faculty: Mehul Raval

Team Name: Model Maverick

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Enrolment No.	Student Name	Programme
AU2140029	Preet Patel	BTech CSE
AU2140032	Dhruv Hingu	BTech CSE
AU2140149	Het Patel	BTech CSE
AU2140151	Dhruvesh Panchal	BTech CSE

Date: 10/02/2024

Summary:

Following the previous weeks of learning and preparing a strong base about the principles of fuzzy logic and its application in vehicle prediction, our focus has shifted towards finding an appropriate dataset. The dataset is the most important thing in machine learning and used for training and validating predictive models that utilize fuzzy logic for vehicle behavior prediction in our case.

Activities:

Meeting:

- As discussed before we met Yagnik Bhavsar for guidance and he helped us not only in the dataset but also solved our queries regarding approach.
- As sir told us in class that we can not use Deep neural network (LSTM) as it will directly give us answers, he guided us to use theta (change observe) and how to calculate the value of theta which we will discuss further in this report.

Theta :

- In case of finding theta we are applying some mathematical formulation on given data set such that it will help us to predict whether car will change lane using criteria like change in position in consecutive frames and also change in speed

Next Steps:

- So we theoretically understand the thing of theta. We also surf about it on the internet. However, the main thing is to implement the whole theta thing and train the model and check the accuracy.
- So in the upcoming week we will implement the theta in code.

Conclusion:

So progress in this week is a bit modest and the reason being is mid sem exams. As we had mid sems last week so we have to go through the whole thing again for revision which took 2-3 days and after that we come up with this theta. However, by next week we will be back on track.