**Driving with LLMs: Fusing Object-Level Vector Modality for Explainable Autonomous Driving**

**Group Members:**

| **NAME** | **ROLE** |
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| Anika Raisa Chowdhury | Implementation, Report, Presentation |
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**Project Summary**

The aim of this project is to implement a use of Large Language Models in the domain of autonomous driving,and is based on a large-scale recent study which is a pioneer in the advancement of autonomous systems, specifically addressing challenges in interpretability and decision-making. The LLM architecture combines numeric information with a pre-trained language model to better understand driving situations. The study also developed a dataset with 160,000 question-answer pairs based on 10,000 driving scenarios, where the questions were generated by both a reinforcement learning agent and a teacher language model (GPT-3.5). However, in our study we worked with a subset of the dataset and have achieved an accuracy of 70%. Overall, the aim behind the implementation is to introduce explainability and clear interpretation of autonomous decisions.

**Github Link**

<https://github.com/RaisaAnika/ece58831_project>

**Link to Wandb** <https://wandb.ai/anubhuti/llm-driver/reports/Weave-val_results-23-12-09-19-20-21---Vmlldzo2MjE4MjM5>

**Data Link**

<https://drive.google.com/file/d/1p2lWIWJaFRjUTIeeeMKCVI-6NHcJ_7as/view?usp=sharing>

**Video Link:**

<https://youtu.be/uMsXjR_XYG0>