**CSE541: - Computer Vision**

**Weekly Report - 6**

**Section Number – 1**

**Group Name: - string the\_boys;**

| **Name** | **Enrolment Number** |
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| Mohsinali Vijapura | AU2040080 |
| Manan Vadaliya | AU2040264 |
| Pruthviraj Dodiya | AU2040175 |
| Harshrajsinh Vaghrola | AU2040195 |

Task performed during the week:

This week we worked on improving the accuracy of the road sign recognition system by implementing a deep learning-based approach. We used a pre-trained Convolutional Neural Network (CNN) model and fine-tuned it on a road sign dataset. We also experimented with different hyperparameters, such as learning rate, batch size, and number of epochs, to achieve better performance.

Outcomes:

We were able to achieve a higher accuracy of 95% on the road sign recognition system, which is a significant improvement compared to the previous week's accuracy. We also learned how to fine-tune a pre-trained CNN model and how to experiment with different hyperparameters to improve the model's performance.

Task to be performed in next week:

In the next week, we will focus on improving the real-time performance of the road sign recognition system. We will explore different optimization techniques, such as model quantization, pruning, and compression, to reduce the model's size and improve its inference time. We will also investigate hardware acceleration techniques, such as GPU and FPGA, to speed up the inference process. Additionally, we will work on integrating the road sign recognition system with a robotic platform to demonstrate its real-world application.