**Challenges encountered during the implementation and testing**

1. **Lack of Computing Power:**

One of the foremost challenges encountered during the implementation and testing phases revolved around the inadequate availability of computing resources. Our project involved working with a sizable and complex dataset that demanded substantial computational power for effective model training. However, due to constraints in computing resources, particularly in terms of processing capacity and memory, we were limited in our ability to execute comprehensive training sessions. This constraint forced us to curtail the duration and intensity of our training regimen, significantly impacting the performance and convergence of our models.

1. **Restricted Training Duration:**

A significant challenge arose from the necessity to truncate the training duration due to the limitations in computing resources. With only a fraction of the ideal training time available, we were constrained to complete our training sessions within a reduced number of epochs, limiting the models' exposure to the dataset and hindering their ability to capture complex data patterns fully. Consequently, the abbreviated training duration compromised the models' performance metrics, such as the Mean Square Error (MSE), leading to suboptimal results during the testing phase.

1. **Optimization Strategies:**

A significant hurdle encountered during our project was the absence of a comprehensive range of optimization strategies tailored specifically for handling very large datasets. Given the immense size and complexity of our dataset, traditional optimization techniques may not have been sufficient to address the unique challenges posed by such voluminous data. The lack of specialized optimization strategies for large datasets presented a barrier to achieving optimal model performance and efficiency, further exacerbating the constraints imposed by limited computing resources.