Kaan Tural

NLP Final Self-Reflection

1. Group Members: Kaan Tural, Arinjay Singh, Jack Oehling
2. Understanding the BiLSTM model architecture and its application in the project was crucial and a huge thing I learned through this project. Additionally, learning how to clean and pre-process Twitter data, which differed significantly from some of the more familiar formats we have run into before, honestly will help me out a lot in the future. This skill is essential due to the odds of unstructured data with labels in real-world scenarios. It helps to know how to deal with this data, and before I can’t say for certain I would have been able to.
3. Effectively evaluating models and utilizing appropriate metrics, such as validation accuracy and weighted F1 score, to gauge performance plotting these, changing different factors based on results (tuning them). Using these things to evaluate the model’s behavior I would say is the most significant thing I had done in the project by a long shot as this took many many hours.
4. Exploring alternative model architectures, like transformers (e.g., BERT), to potentially enhance language understanding and improve accuracy. Additionally, considering the integration of sentiment analysis tools like VADER during pre-processing rather than as a standalone model could be beneficial. While achieving around 80% accuracy is nothing bad, it’s pretty good actually and I’m proud of it. There's always room for refinement and exploration of new techniques to hopefully improve this, that is why I want to change and try out these things.
5. The workload was distributed evenly among team members, with each individual contributing meaningfully at different stages of the project. Collaborative support was provided whenever someone faced challenges due to varying schedules or knowledge gaps. The teamwork experience was exceptionally positive, fostering a productive and efficient environment.