*Princy Patel*

TO,
IITD-AIA Foundation of Smart Manufacturing

**Subject:** Weekly Progress Report for Week 8

Dear Sir,

During this week, I focused on various aspects of my internship, including data augmentation, building a Feedforward Neural Network (FNN) model, hyperparameter tuning, and model deployment. Here's a day-wise summary of my activities:

**July 24:**
- Performed data augmentation on the dataset to enhance the data.
- Learned about Feedforward Neural Network (FNN) and its architecture.
- Built an FNN model and iteratively improved the R2 score by exploring different optimizers, batch sizes, and epochs.

**July 25:**
- Conducted hyperparameter tuning on the FNN model.
- Learned about applying GridSearchCV for hyperparameter tuning.
- Utilized GridSearchCV to find the optimal hyperparameters for the FNN model.

**July 26:**
- Worked on preparing the internship report while continuing hyperparameter tuning.
- Focused on improving model results through hyperparameter tuning.

**July 27:**
- Continued working on the internship report and hyperparameter tuning.
- Learned more about hyperparameter tuning techniques.
- Utilized GridSearchCV to further refine the model.

**July 28:**
- Worked on the internship report and model deployment.
- Gained knowledge and experience in deploying the model.
- Faced challenges related to data augmentation.

**July 29:**
- Continued working on the internship report and model deployment.
- Learned about the Pickle library and used it for model deployment.
- Dealt with issues related to data augmentation.

**July 30:**
- Focused on completing the internship report and preparing a presentation.
- Ensured all aspects of the report were addressed.

- Made progress on the internship report and presentation.

Throughout the week, I actively engaged in various tasks, including data augmentation, building an FNN model, hyperparameter tuning, and model deployment. Additionally, I devoted time to preparing the internship report and presentation, documenting the work done during the internship.

There were challenges faced related to data augmentation, which required attention and troubleshooting. However, progress was made as per the track, with tasks completed successfully. It was a week of continuous learning and exploration in the fields of deep learning, model optimization, and model deployment.