Princy Patel

TO,
IITD-AIA Foundation of Smart Manufacturing

Subject: Weekly Progress Report for Week 7

Dear Sir,
During this week, I focused on various aspects of my internship, including hyperparameter tuning, cloud computing, and data augmentation techniques. Here's a day-wise summary of my activities:

July 17:
- Attempted hyperparameter tuning on the model using grid and Bayesian methods.
- Learned about the principles and applications of grid and Bayesian hyperparameter tuning.
- Conducted hyperparameter tuning with both grid and Bayesian techniques.

July 18:
- Continued hyperparameter tuning on the model using grid and Bayesian methods.
- Gained practical experience in implementing grid and Bayesian hyperparameter tuning.
- Explored the results of hyperparameter tuning to identify the best configurations.

July 19:
- Focused on learning about cloud computing.
- Explored the Flask framework, which is used for creating web applications in Python.
- Gained knowledge about Flask and its functionalities.

July 20:
- Worked on improving the regression model using hyperparameter tuning techniques.
- Explored additional ways to implement hyperparameter tuning for the Light Gradient Boosting regressor and Random Forest regressor.
- Learned about various approaches to hyperparameter tuning.

July 21:
- Performed hyperparameter tuning on the Light Gradient Boosting regressor and Random Forest regressor.
- Gained practical experience in coding the hyperparameter tuning process for the specific models.
- Analyzed the impact of hyperparameter tuning on model performance.

July 22:
- Learned about GridSearchCV, a technique used for hyperparameter tuning.
- Explored the principles and applications of GridSearchCV.
- Gained understanding of GridSearchCV as a cross-validation technique for finding optimal parameter values.

July 23:

- Focused on learning about data augmentation techniques.
- Explored how data augmentation is used to create synthetic data points when the dataset is small.
- Performed data augmentation techniques to enhance the dataset.

Throughout the week, I actively engaged in hyperparameter tuning using grid and Bayesian methods. Additionally, I focused on learning about cloud computing, specifically the Flask framework, and implemented data augmentation techniques to improve the dataset. The week involved continuous learning and practical application of various techniques to enhance the regression model.

There were no significant issues or closures during the week. Progress was made as per the track, with tasks completed successfully. It was a week of continuous learning and exploration in the fields of hyperparameter tuning, cloud computing, and data augmentation techniques.