To
IITD-AIA Foundation of Smart Manufacturing

Subject : **Weekly Progress Report for Week 5**

Respected sir,

This is my weekly report from 03 July to 09 July that will reflect my progress in the whole week.

What's happening this week:

- Work on the dataset
- Data pre-processing
- Dash Framework

My Understanding on my project

An important concern in predictive maintenance is the prediction of remaining useful life (RUL), which is an estimate of the number of remaining years that a component in a production line is estimated to be able to function in accordance with its intended purpose before warranting replacement.

Remaining useful life (RUL) is the length of time a machine will operate before it requires repair or replacement. By estimating RUL, engineers can schedule maintenance, optimize operating efficiency, and avoid unplanned downtime. For this reason, estimating RUL is a top priority in predictive maintenance programs

Weekly Progress:

July 03:

- Downloaded the dataset provided by my mentor.
- It is the PHM IEEE 2012 data challenge dataset .
- Previously whatever I did was on NASA's bearing dataset.

July 04:

Continue the same learning process as-

- After downloading the data , try to understand it.
- Read the dataset and understand it.
- Start data preprocessing.

July 05:

- Pre-processing the data which is most imp
- Faced the problem while performing.

July 06:

- Continue to preprocess the data.
- Study the dataset.
- Study how to analyze spectrum.

July 07:

- Continue to learn how to analyze spectrum.
- Data processing of the data.
- Study the dataset.

July 08:

- Continue on data preprocessing.
- Started feature extraction of the dataset.
- Faced many problems and tried to solve them.

July 09:

- Continue to study about the project and explore the ways to complete it.
- Feature extraction of the dataset.
- About streamlit and how to use it.