

To
IITD-AIA Foundation of Smart Manufacturing

Subject : **Weekly Progress Report for Week 4**

Respected sir,

This is my weekly report from 26 June to 02 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:

June 26:

- Theoretical part of dash framework.
- Implementation of dash framework.
- How it works.
- How to use it.

June 27:

Continue the same learning process as-

- Theoretical part of dash framework.
- Implementation of dash framework.
- How it works.
- How to use it.
- Also searched for a dataset.

June 28:

- Searched the dataset and downloaded it.
- Also faced a problem downloading it but it would be solved.
- Downloaded the jupyter notebook .

June 29:

- Convert the dataset into the suitable form so that it can be used easily.
- Rectified the problems that were faced during downloading the dataset.
- Start working on a dataset.

June 30:

- Continue working on the dataset.

- Perform data pre-processing.
- Dash framework study.

July 01:

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

July 02:

- 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.