

To  
IITD-AIA Foundation of Smart Manufacturing

Subject : **Weekly Progress Report for Week 7**

Respected sir,

This is my weekly report from 17 July to 23 July that will reflect my progress in the whole week.

What's happening this week:

- Work on the dataset
- Data pre-processing
- Feature extraction.
- CNN function.

## **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 17:**

- performing data preprocessing on it.
- continue on pre-processing of the dataset.
- complete the feature detection .
- start working on the RUL function .

### **July 18:**

- performing data preprocessing on it.
- continue on pre-processing of the dataset.
- complete the feature detection .
- start working on RUL function and also perform Convolution Neural Network (CNN) on the provided dataset.
- Project is about to be completed.

### **July 19:**

- performing data preprocessing on it.
- continue on pre-processing of the dataset.
- complete the feature detection .
- start working on RUL function and also perform Convolution Neural Network (CNN) on the provided dataset.
- Project is about to complete and study about the streamlit to make an interface using it.

### **July 20:**

- performing data preprocessing on it.
- continue on pre-processing of the dataset.
- complete the feature detection .

- start working on RUL function and also perform Convolution Neural Network (CNN) on the provided dataset.
- Project is about to complete and study about the streamlit to make an interface using it.
- start making interfaces using streamlit.

### **July 21:**

- performing data preprocessing on it.
- continue on pre-processing of the dataset.
- complete the feature detection .
- start working on RUL function and also perform Convolution Neural Network (CNN) on the provided dataset.
- Project is about to complete and study about the streamlit to make an interface using it.
- I Worked on the interface but faced a problem.

### **July 22:**

- performing data preprocessing on it.
- continue on pre-processing of the dataset.
- complete the feature detection .
- start working on RUL function and also perform Convolution Neural Network (CNN) on the provided dataset.
- Project is about to complete and study about the streamlit to make an interface using it.

### **July 23:**

Worked on the interface of the project using streamlit.

So I opened the jupyter notebook in VS code and tried to work on it.