To
IITD-AIA Foundation of Smart Manufacturing

Subject : **Weekly Progress Report for Week 2**

Respected sir,

This is my weekly report from 12 June to 18 June that will reflect my progress in the whole week.

What's happening this week:

- Building base for our project
- Deep learning
- Learn Tensorflow

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 12:

Start learning from a recommended youtube channel about deep learning as a foundation for our projects.

- Introduction to deep learning
- Convolution neural network
- Reinforcement learning

June 13:
Continue the learning process on deep learning.

- Deep learning new frontier
- Text to image generation
- Modern era of statistics
- Future of robot learning

June 14:

- Start to learn tensorflow
- Learn about their use
- AI for Science

June 15:

- Implementation of code for deep learning.
- Faced problems while implementing
- Tried to overcome it by using various resources available on google and youtube.

June 16:

After project allocation, I started exploring about it

- About its dataset
- Algorithms that will be used
- Steps to perform this project

June 17:

- Study more about dataset
- Explore the algorithms like CNN and RNN
- Implementation of algorithms

June 18:

- Continue to study about the project and explore the ways to complete it.
- Learn about pyTorch.
- Learn about tensorflow