Project ID: PW20KS02

Project Type : Minor

Project Title: Predictive Maintenance for Water Pumps

Team Members: PRANEET S.Y(01FB16ECS266) , R Ruthuvikas(01FB16ECS281) ,
RAGHAV R.B(01FB16ECS286)

Project Guide: Prof Srinivas.K.S

Project Abstract: A significant prospect and utmost heed is given to
Predictive Maintenance (PdM) and Machine Learning (ML). Both fields are
evolving and need extensive research. This report has primarily managed
to capture information regarding various ML approaches and especially the
potential of Recurrent Neural Networks, and secondly, understanding and
building an ML model for PdM.

     This report aims to be an introductory guide for those interested in
using ML for PdM. Required background information has been assembled to
get a better picture. The report includes development of various ML models
to find Remaining Useful Life (RUL) on the Water Pump Dataset. There has
been information provided wherever necessary and code snippets are
presented to assist the reader in understanding machine learning and to
provide an approach to start building models.

     PdM in itself is a technique for monitoring operating conditions to
provide data that can ensure prediction in time-series datasets and reduce
the number and ultimately the cost of machine failures. ML is gaining
prominence as a tool for detecting patterns and making predictions from
large amounts of data. Neural Networks (NN) are majorly used in achieving
high accuracies for ML tasks.

Code Execution : python3 backend.py