

WEEKLY PROGRESS REPORT

Introduction:

- Focus on predicting the Remaining Useful Life (RUL) of bearings through vibration data analysis.
- Objective: Develop an accurate predictive model for estimating the remaining lifespan of bearings.
- Importance of proactive maintenance planning to avoid unexpected failures.

Algorithm:

- Vibration data analysis as a powerful tool for predicting RUL.
- Dataset: Vibration measurements from NASA's machinery.
- Advanced signal processing and machine learning techniques used.
- Extracting time-based features: RMS, P2P values, Shannon entropy, clearance factor.

Findings:

- Importance of analyzing vibration signals for RUL prediction.
- Extracted time-based features provided valuable insights.
- Proactive maintenance planning enables timely replacement or repair.
- Contributions to predictive maintenance in various industries.

Conclusion:

- Advancements in RUL prediction through vibration data analysis.
- Developed predictive model facilitates proactive maintenance planning.
- Valuable insights for industries reliant on machinery reliability.
- Further research to enhance accuracy and applicability.