Project Plan

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Project Title:

Remaining Useful Life Prediction Using Machine Learning Methods

Group Members:

GitHub: https://github.com/ccabes15/RUL_Project_ML

- `Yuka Chen` @yjchen9596
- `Jeremy Joy` @Thrice-J
- `Concillia Mpofu` @ConcilliaHlezi
- `Connor Cabrey` @ccabes15

We will communicate regular through text and Github. We will have our own branch to work on our own assigned responsibilities, and merge to main branch when we meet on Zoom bi-weekly

Topic:

Using the NASA PHM08 Challenge Dataset, our group will attempt to predict the remaining useful life of engines with multiple Machine Learning methods and approaches.

Questions of Interest:

At least two involving different variables used for regression oR classification.

1) What variables of the 26 most contribute to the Remaining Useful Life of the engines?
2) Which machine learning method most accurately predicts RUL?
3) What variables can be removed to speed up prediction of RUL?

Approaches:

- Multiple Regression
- Ridge Regression
- Clustering
- Jackknife for cross-validation
- Principal Component Analysis

Group Responsibilities:

`Connor`

- Identify Data Source
- Data upload and cleaning
- Initial EDA

- Clustering
- Poster Layout

`Connie`

- Multiple Regression
- EXSUM

`Jeremy`

- Ridge Regression
- PCA
- Ethical Assessment/Stakeholders

`Yuka`

- Jackknife/PCA
- Project Compilation

Deliverable:

Our group will do Option A: Presentation or Poster. We will be creating a presentation.