# Ideation Phase

# Brainstorm & Idea Prioritization

| Team ID | PNT2022TMID12226 |
|---|---|
| Project Name | Machine Learning-Based Predictive Analysis for Aircraft Engine |
| Maximum Marks | 4 Marks |

**Step-1: Team Gathering, Collaboration and Select the Problem Statement:**

**2**

**Brainstorm**

Write down any ideas that come to mind that address your problem statement.

⏱ 10 minutes

| | | | |
|---|---|---|---|
| By using the RTD sensor we can detect excess heat in advance | Elastic-net regression used to compare the values | | Using the Linear Regression we can make prediction in numerical values | Usage of light GBM classier |
| We can use the random forest algorithm to make the prediction | Using DNN for the engine maintanance | | CatBoost recognize the sound and pictures | To ensure the correct leavel of humidity using sensors |
| Usage of Ridge regression for finding true value | Ensemble method used to predict the best value | | We can use the Naive Bayes algorithm for the prediction | Lasso regression goal is to acquire a subset |
| Using the probablistic reasoning for the prediction | By using the Decision Tree algorithm we can make the yes/no prediction | | We can use different algorithms for finding the efficient algorithms. | Using PCA algorithms which can be used for feature extraction. |

**3**

**Group ideas**

Take turns sharing your ideas while clustering similar or related notes as you go.
In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

⏱ 20 minutes

| | | | |
|---|---|---|---|
| By using the RTD sensor we can detect excess heat in advance | Elastic-net regression used to compare the values | We can use the random forest algorithm to make the prediction | Using DNN for the engine maintanance |
| Usage of Ridge regression for finding true value | Ensemble method used to predict the best value | Using the probablistic reasoning for the prediction | By using the Decision Tree algorithm we can make the yes/no prediction |
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**Step-2: Brainstorm, Idea Listing and Grouping :**

**Step-3: Idea Prioritization:**

**Prioritize**

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

⏱ 20 minutes

**Importance**

If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

**By using the RTD sensor we can detect excess heat in advance**

**Lasso regression goal is to acquire a subset**

**By using the Decision Tree algorithm we can make the yes/no prediction**

**Ensemble method used to predict the best value**

**Usage of light GBM classier**

**We can use different algorithms for finding the efficient algorithms.**

**We can use the Naive Bayes algorithm for the prediction**

**Using the probablistic reasoning for the prediction**

**CatBoost recognize the sound and pictures**

**Using the Linear Regression we can make prediction in numerical values**

**Using DNN for the engine maintanance**

**Usage of Ridge regression for finding true value**

**We can use different algorithms for finding the efficient algorithms.**

**To ensure the correct leavel of humidity using sensors**

**Elastic-net regression used to compare the values**

**Feasibility**

Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort, complexity, etc.)