

Ideation Phase Brainstorm & Idea Prioritization Template

Date	10 September 2022
Team ID	PNT2022TMID06086
Project Name	Project - Machine Learning-Based Predictive Analytics for Aircraft Engine
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

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

template

Brainstorm & idea prioritization

🕒 10 minutes to prepare

🕒 1 hour to collaborate

👤 2-8 people recommended

🗨️ Share template feedback

➔

Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

🕒 10 minutes

A

Team gathering
 Boopathi S
 Arunkumar V
 Sarjay G
 Dharunkumar CV

B

Set the goal
 This Brainstorming session is about the project Machine learning based predictive analytics for aircraft engine

C

Facilitation tools
 Mural

1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

🕒 5 minutes

PROBLEM

It is difficult to identify the defects such as exhaustion, fuel starvation(blockage, vapor lock), etc

PROBLEM

Risks of aircraft due to engine failure

PROBLEM

It is difficult to predict the defects as early as possible

PROBLEM

Misfueling in engine leads to engine ignition failure

Step-2: Brainstorm, Idea Listing and Grouping

2

Brainstorm

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

🕒 10 minutes

TIP

You can select a sticky note and hit the pencil (switch to sketch) icon to start drawing!

Boopathi S

Usage of light GBM classifier

Usin DNN for the engine maintenance

Arunkumar V

To ensure the correct level of Humidity by using Sensors

Detecting the Fuel Level using Mesures

Usage of Ridge regression for finding true value

Using the Linear Regression

Analysing the Weather report by information from Airline Office

We can use Naive Bayes algorithm for Detection

Sanjay G

We can predict the failure by analyzing the earliest problems in engine symptoms

we can use different algorithms for efficient identification

Dharunkumar C

using the probabilistic reasoning for the prediction

Ensemble method to predict the best values

Keep maintaining the problems shown by the engine for prediction

Confirm the status of the Engine to know about the engine status

Lasso regression goal to acquire a subset

Elastic-net regression for predic values

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, 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

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Usin DNN for the engine maintenance

Usage of Ridge regression for finding true value

Using the Linear Regression

To ensure the correct level of Humidity by using Sensors

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We can predict the failure by analyzing the earliest problems in engine symptoms

we can use different algorithms for efficient identification

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Step-3: Idea Prioritization

4

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

