

Ideation Phase


Brainstorm & Idea Prioritization Template

Date	19 September 2022
Team ID	593035
Project Name	Deep Learning Model For Eye Disease Prediction
Maximum Marks	4 Marks


Brainstorm & Idea Prioritization Template:

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

Template



Brainstorm
& idea prioritization

2 People

➔

Before you collaborate

it's essential to align our understanding of the project's goals and methodologies. Clear communication and shared knowledge will lay the groundwork for a successful collaboration in advancing eye disease prediction using deep learning techniques.

A

Team gathering

Proper planning ensures a strong foundation for developing an accurate and impactful deep learning model

B


Set the goal

focus will be on enhancing accuracy and predicting eye diseases through advanced deep learning models

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.




Problem:-


How might we challenge is to enhance the accuracy of eye disease classification by leveraging deep learning methods, specifically Transfer Learning techniques such as Inception V3, VGG19, and Xception V3, to detect conditions like cataract, diabetic retinopathy, and glaucoma, enabling early diagnosis and personalized treatment for patients?





Key rules of brainstorming


To run an smooth and productive session


Stay in topic.

Encourage wild ideas.

Defer judgment.

Listen to others.

Go for volume.

If possible, be visual.

Step-2: Brainstorm, Idea Listing and Grouping

2

Brainstorm

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

⌚ 10 minutes

Person 1

I suggest including detailed patient history, like duration of symptoms and lifestyle factors, alongside images for a more holistic approach to early eye disease detection using deep learning

Person 2

Considering the diverse population, using region-specific data for training models and incorporating cultural nuances in image interpretation could enhance the model's performance for Indian patients.

I think we can make the eye disease classifier better by getting more pictures of different people's eyes, especially those with rare conditions, so the AI learns more about everyone's eyes."

what if we combine the strengths of Inception V3 and Xception V3 models for better accuracy in spotting cataract and diabetic retinopathy

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 can break it up into smaller sub-groups.

⌚ 20 minutes

Model Improvement

Let's experiment with fine-tuning the hyperparameters like learning rate and batch size to see if it boosts our model's accuracy."I'm thinking we could explore attention mechanisms in our deep learning model to focus on critical features related to eye diseases.

Data and Pre-processing Enhancement

We should definitely look into advanced pre-processing techniques like contrast enhancement and noise reduction to improve the overall quality of our input images.

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

TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the H key on the keyboard.

