

Ideation Phase

Brainstorm & Idea Prioritization Template

Date	19 November 2023
Team ID	592033
Project Name	ASL - Alphabet Image Recognition
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.

Mural Map -

<https://app.mural.co/t/asl8590/m/asl8590/1701114209574/3d2a7ac7a98be6aef369f8867060a67fc310525c?sender=ue8ac45f2fd11a0f4468e9757>

ASL - Alphabet Image Recognition

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

Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

10 minutes to prepare
 1 hour to collaborate
 2-8 people recommended

- A Team gathering**
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.
- B Set the goal**
Think about the problem you'll be focusing on solving in the brainstorming session.
- C Learn how to use the facilitation tools**
Use the Facilitation Superpowers to run a happy and productive session.
[Open article](#) →

PROBLEM

This project addresses the communication challenges faced by individuals with hearing impairments by developing a sophisticated ASL-Alphabet Image Recognition system. The lack of such a solution hinders the seamless integration of the deaf and hard-of-hearing community into digital platforms. Our goal is to create a system that accurately recognizes ASL alphabet gestures in real-time, overcoming challenges in dataset diversity and ensuring practical usability.

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

10 minutes

Person 1

Data Collection:
Prioritizing collecting a diverse dataset of ASL alphabet gestures and considering variations in lighting, backgrounds, and hand orientations.

Data Preprocessing:
Exploring techniques for image normalization and augmentation to enhance model robustness and investigate methods to handle noise and improve overall data quality.

Training:
Defining a training pipeline for the selected model using the collected dataset and experimenting with hyperparameter tuning to improve model performance.

Model Selection:
Research and select a suitable deep learning model for image recognition and Prioritize models that are lightweight and efficient for deployment on various devices.

Community Engagement:
Explore opportunities for collaboration with the ASL community and prioritize outreach and engagement to gather insights and improve the project.

Validation and Testing:
Establish a rigorous validation process to ensure the model generalizes well and Prioritize testing on diverse datasets to assess real-world performance.

User Interface (UI):
Design a user-friendly interface for capturing and uploading images. Prioritize simplicity and accessibility for users with varying technical backgrounds.

Performance Metrics:
Define metrics for evaluating the model's accuracy, precision, and recall and Prioritize continuous monitoring to identify and address performance issues.

Security and Privacy:
Implement measures to ensure data security and user privacy and Prioritize encryption, secure data storage, and user consent mechanisms.

User Feedback Loop:
Establish a mechanism for collecting user feedback on recognition accuracy. Prioritize iterative improvements based on user input.

Documentation:
Create comprehensive documentation for both users and developers. Prioritize clear instructions for model retraining and updates.

Maintenance Plan:
Develop a maintenance plan for ongoing updates and bug fixes. Prioritize regular checks for model drift and adaptability to new data.

20 minutes

bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

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Step-3: Idea Prioritization

ould all be on the same page about what's important and. Place your ideas on this grid to determine which portan and which are feasible.

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

After you collaborate

You can export the mural as an image or pdf to share with members of your company who might find it helpful.

Quick add-ons

- Share the mural**
Share a view link to the mural with stakeholders to keep them in the loop about the outcomes of the session.
- Export the mural**
Export a copy of the mural as a PNG or PDF to attach to emails, include in slides, or save in your drive.

Keep moving forward

- Strategy blueprint**
Define the components of a new idea or strategy.
[Open the template ->](#)
- Customer experience journey map**
Understand customer needs, motivations, and obstacles for an experience.
[Open the template ->](#)
- Strengths, weaknesses, opportunities & threats**
Identify strengths, weaknesses, opportunities, and threats (SWOT) to develop a plan.
[Open the template ->](#)