Ideation Phase

Brainstorm & Idea Prioritization Template

Date	24 June 2025
Team ID	LTVIP2025TMID35409
Project Name	HematoVision: Advanced Blood Cell Classification Using Transfer Learning
Maximum Marks	4 Marks

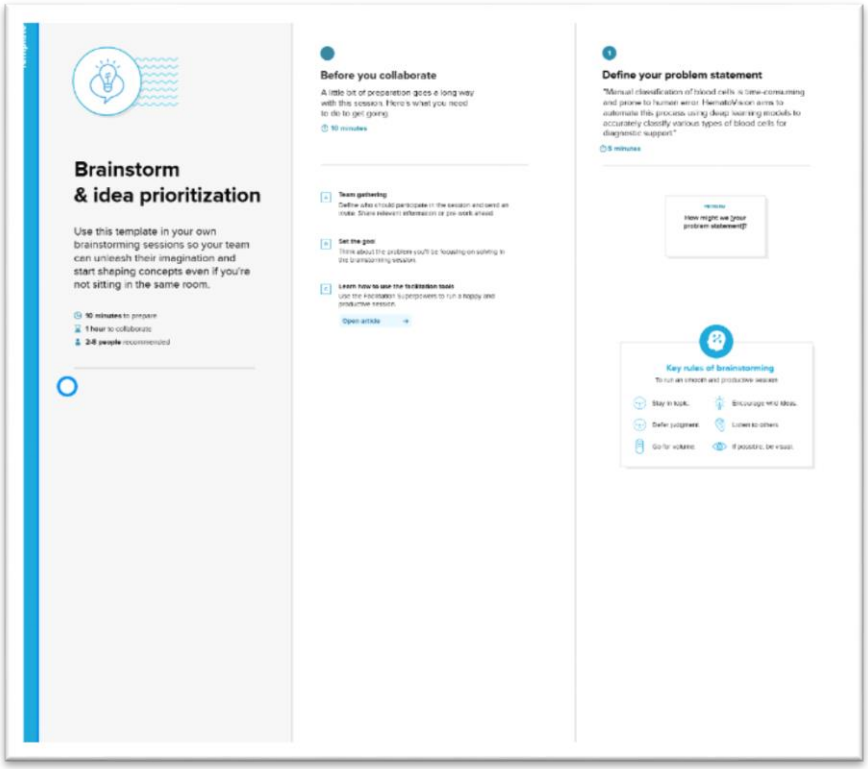
Brainstorm & Idea Prioritization Template:

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.

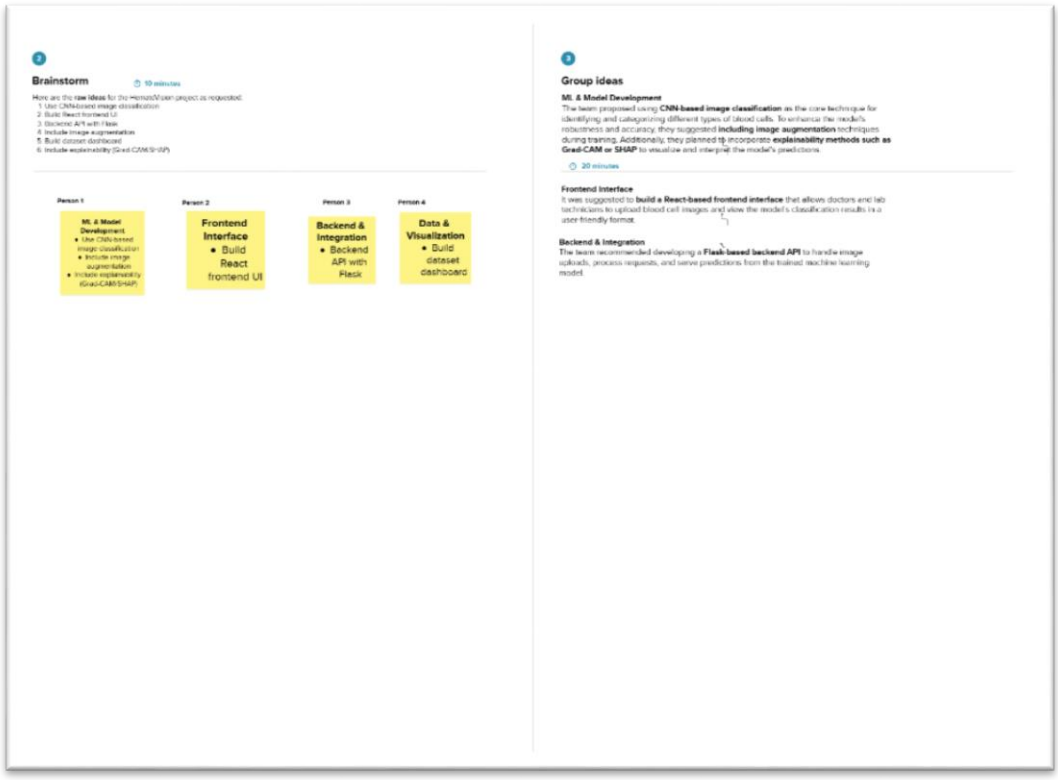
Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

Reference: https://www.mural.co/templates/brainstorm-and-idea-prioritization

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



Step-2: Brainstorm, Idea Listing and Grouping



Brainstorm

Here are the raw ideas for the HemoVision project as requested:

1. Use CNN-based image classification
2. Build React frontend UI
3. Backend API with Flask
4. Include image augmentation
5. Build dataset dashboard
6. Include explainability (Grad-CAM/SHAP)

Person 1 — **ML & Model Development**
- Use CNN-based image classification
- Include image augmentation
- Include explainability (Grad-CAM/SHAP)

Person 2 — **Frontend Interface**
- Build React frontend UI

Person 3 — **Backend & Integration**
- Backend API with Flask

Person 4 — **Data & Visualization**
- Build dataset dashboard

Group ideas

ML & Model Development
The team proposed using **CNN-based image classification** as the core technique for identifying and categorizing different types of blood cells. To enhance the model's robustness and accuracy, they suggested **including image augmentation** techniques during training. Additionally, they planned to incorporate **explainability methods such as Grad-CAM or SHAP** to visualize and interpret the model's predictions.

20 minutes

Frontend Interface
It was suggested to **build a React-based frontend interface** that allows doctors and lab technicians to upload blood cell images and view the model's classification results in a user-friendly format.

Backend & Integration
The team recommended developing a **Flask-based backend API** to handle image uploads, process requests, and serve predictions from the trained machine learning model.

Step-3: Idea Prioritization