

Ideation Phase

Date:31 January 2025

Team ID:LTVIP2026TMIDS91486

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 team members to participate in the creative thinking process that leads to effective problem solving. Prioritizing volume over value, diverse ideas are generated, evaluated, and refined collaboratively.

This template is used to structure idea generation and selection for the HematoVision project.

Step-1: Team Gathering, Collaboration and Selection of 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 sitting in the same room.

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

Step-1: Team Gathering, Collaboration and Selection of Problem Statement

Identified Problem Area:
Manual blood cell classification and microscopic image analysis.

Finalized Problem Statement:

Manual blood cell classification is a time-consuming and expertise-dependent process prone to human error.

Traditional diagnostic workflows require automated systems capable of accurately identifying different leukocyte types using deep learning techniques.



Key rules of brainstorming

To run an smooth and productive session

- 💬 Stay in topic: 💡 Encourage wild
- 💬 Listen to others. 🎧 Listen to others.
- 🎤 Go for volume. 📋 If possible, be visual.

Step-2: Brainstorming, Idea Listing and Grouping

2 Brainstorm

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

⌚ 10 minutes

TIP: You can insert a sticky note next to the pencil icon to switch tools for drawing!

3 Group Ideas

Telekine 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 can break it up into smaller sub-groups.

⌚ 10 minutes

Step-2: Brainstorming, Idea Listing and Grouping

Generated Ideas		Idea Grouping
<ul style="list-style-type: none"> Classical Image Processing Techniques Traditional Machine Learning Approach Custom CNN Model Transfer Learning-Based Deep Learning Model 	<ul style="list-style-type: none"> Feature extraction using handcrafted classification using traditional ML algorithms End-end CNN-based classification Leveraging pre-trained CNN architectures 	

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

Step-3: Idea Prioritization

Evaluation Criteria

- ✓ Accuracy Potential
- ✓ Computational Efficiency
- ✓ ✓ Implementation Complexity
- ✓ Scalability

Importance

Which of these tasks could get done quickly, easily, or cost little and have the most positive impact?

Feasibility

Regardless of their implementation, where tools are more feasible than others? (Cost, time, effort, complexity, risk)

TIP: Participants can use their phones to point or draw directly onto the grid to place their ideas. Encourage this by having the team practice holding their sticky notes in one hand.

Selected Approach

Chosen Solution:

Transfer learning provides higher classification accuracy, faster convergence, efficient feature extraction reduced training conventional complexity computational approach.