

2. Ideation Phase

2.3 Brainstorming & Idea Prioritization


Date	28 June 2025
Team ID	LTVIP2025TMID35678
Project Name	Pattern Sense: Classifying Fabric Patterns Using Deep Learning
Maximum Marks	4 Marks

Brainstorm & Problem Identification:

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

We began our ideation journey by coming together as a team of four, each bringing different technical strengths and creative perspectives. We scheduled a brainstorming session using virtual collaboration tools like Google Meet and Jamboard. During this session, we discussed various problem areas in AI and Computer Vision, noting our mutual interest in applying machine learning to real-world visual classification problems.

After careful discussion, we selected the problem of automatically identifying fabric patterns (like striped, polka-dotted, plain, checked) using a deep learning model. This problem is relevant to the textile and fashion industries, where manual classification can be time-consuming and inconsistent. Our aim was to automate this process using a trained Convolutional Neural Network (CNN).



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

➔

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**
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](#) ➔

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

How might we [your problem statement]?



Key rules of brainstorming

To run a 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

We individually listed out multiple project ideas across domains such as:

- Medical Imaging Analysis
- Sign Language Detection
- Fabric Pattern Classification
- Defect Detection in Manufacturing
- Smart Plant Disease Identifier
- Real-time Weather-Based Clothing Suggestion
- Garbage Classification using AI

After grouping and comparing, we realized our interest and resource alignment was best with Visual Classification, especially focusing on fabric patterns due to the abundance of datasets and scope for computer vision innovation.

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!



3

Group ideas

Take turns 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.

20 minutes

TIP
Add customizable tags to sticky notes to make it easier to find, remove, organize, and categorize important ideas as themes within your mural.

Step-3: Idea Prioritization

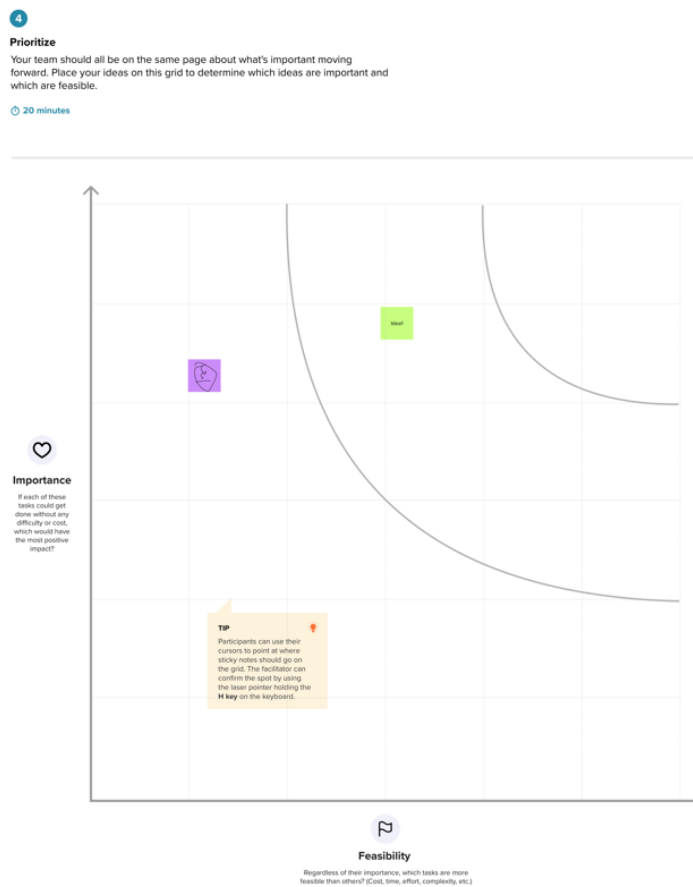
We prioritized our ideas based on two axes:

- Feasibility (Do we have the resources, skills, and data?)
- Impact (Is it relevant, practical, and innovative?)

After plotting the ideas, "Fabric Pattern Classification" stood out as highly feasible and impactful. It had:

- Clear scope for applying CNN-based image classification.
- Relevance to a growing industry need in textiles.
- Availability of labeled image datasets.
- Potential for a visually engaging and intuitive web application.

Thus, we finalized Pattern Sense as our project. It allows us to explore deep learning in a meaningful, deployable, and real-world applicable scenario.



Final Idea Chosen: Pattern Sense – A Deep Learning-based Web Application to Automatically Classify Fabric Patterns into categories like striped, plain, polka-dotted, and checked using a trained CNN model deployed via Flask.