Ideation Phase
Brainstorm & Idea Prioritization

Date	27 June 2025
Team ID	LTVIP2025TMID5573
Project Name	Enchanted wings:Marvels of Butterfly species
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization :

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.

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

Our team of four members gathered to collaboratively explore real-world problems in the field of biodiversity and conservation. We identified a common interest in nature and technology, especially the classification of butterfly species—a task that is challenging for researchers, conservationists, and nature enthusiasts due to the visual similarity of different species.

After discussion, we finalized the following problem statement:

“ How might we build an AI system to classify butterfly species accurately and instantly from images using a user-friendly web application? **”**

Step-2: Brainstorm, Idea Listing and Grouping

We conducted an open brainstorming session where each member contributed ideas freely. These were some of the key ideas generated:

Model & Algorithm

- Use a pre-trained Convolutional Neural Network (CNN) like VGG16

- Employ transfer learning for better accuracy and reduced training time

User Interface & Experience

- Build a visually appealing homepage with butterfly-themed animations
- Create a glassmorphic upload card for image input
- Provide instant prediction results in a simple result page

Features

- Show confidence scores for predictions
- Enable camera integration for real-time classification
- Include an About Page to explain project purpose and technology

Educational Engagement

- Add common names and facts about each predicted species
- Create a platform accessible to students, educators, and citizen scientists

We grouped these ideas into the following categories:

- Model Architecture
- Web Design & UI/UX
- Feature Enhancements
- Educational Value

Step-3: Idea Prioritization

After listing and grouping, we prioritized our ideas using a matrix of Feasibility vs. Impact:

1. Using VGG16 with transfer learning

   High Feasibility, High Impact

➡ Included in MVP and already implemented

2. Glassmorphic UI with butterfly-themed animation

   Medium Feasibility, High Impact

➡ Implemented using HTML, CSS

3. Upload and Predict Flow

Essential Feature

➡ Core to application functionality

4. Real-time camera integration

Medium Feasibility, Medium Impact

➡ Deferred to future updates

5. Display confidence score

Medium Feasibility, Medium Impact

➡ Considered for second version

6. About Page with project info

Easy to implement, High Educational Value

➡ Implemented

This prioritization helped us clearly define our Minimum Viable Product (MVP) and schedule additional features for future releases.