

# Project Planning Phase

## Project Planning Template

|                      |   |
|----------------------|---|
| <b>Date</b>          | 15 February 2025                        |
| <b>Team ID</b>       | LTVIP2025TMID42449                      |
| <b>Project Name</b>  | Butterfly Species Classification System |
| <b>Maximum Marks</b> | 5 Marks                                 |

## 1 Product Backlog, Sprint Schedule, and Estimation

Use the below template to create product backlog and sprint schedule.

| <b>Sprint</b> | <b>Functional Requirement (Epic)</b> | <b>User Story Number</b> | <b>User Story / Task</b>             | <b>Story Points</b> | <b>Priority</b> |
|---------------|--------------------------------------|--------------------------|--------------------------------------|---------------------|-----------------|
| Sprint-1      | Data Preprocessing                   | US-05                    | Resize and normalize images          | 3                   | High            |
| Sprint-1      | Data Preprocessing                   | US-06                    | Apply image augmentation             | 2                   | High            |
| Sprint-1      | Model Building                       | US-07                    | Fine-tune MobileNetV2 for 75 classes | 5                   | High            |
| Sprint-2      | Model Testing                        | US-08                    | Evaluate model with metrics          | 3                   | High            |
| Sprint-2      | Model Testing                        | US-01                    | Upload image to identify species     | 3                   | High            |
| Sprint-2      | Classification                       | US-02                    | View prediction confidence           | 2                   | Medium          |
| Sprint-3      | Application                          | US-03                    | Access species facts                 | 2                   | High            |
| Sprint-3      | Application                          | US-04                    | Use intuitive UI for uploads         | 3                   | High            |

## 2 Project Tracker, Velocity & Burndown Chart

| <b>Sprint</b> | <b>Total Story Points</b> | <b>Duration</b> | <b>Sprint Start Date</b> | <b>Sprint End Date (Planned)</b> | <b>Story Points Completed (as on Planned End Date)</b> | <b>Sprint Release (Actual)</b> |
|---------------|---------------------------|-----------------|--------------------------|----------------------------------|--|--------------------------------|
| Sprint-1      | 10                        | 5 Days          | 01 Feb 2025              | 05 Feb 2025                      | 10   | 05 Feb 2025                    |
| Sprint-2      | 8                         | 5 Days          | 06 Feb 2025              | 10 Feb 2025                      |  |                                |
| Sprint-3      | 5                         | 5 Days          | 11 Feb 2025              | 15 Feb 2025                      |  |                                |

## 2.1 Velocity

Total Story Points = 10 (Sprint-1) + 8 (Sprint-2) + 5 (Sprint-3) = 23

Number of Sprints = 3

$$\text{Velocity} = \frac{\text{Total Story Points}}{\text{Number of Sprints}} = \frac{23}{3} \approx 7.67 \text{ (Story Points per Sprint)}$$

Assuming a 5-day sprint duration, the average velocity per day is:

$$AV = \frac{\text{Velocity}}{\text{Sprint Duration}} = \frac{7.67}{5} \approx 1.53 \text{ (Story Points per Day)}$$

## 2.2 Burndown Chart

A burndown chart is a graphical representation of work left to do versus time, used to track progress in agile methodologies.

### References:

<https://www.visual-paradigm.com/scrum/scrum-burndown-chart/>

<https://www.atlassian.com/agile/tutorials/burndown-charts>