**Project Planning Phase**

**Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)**

|  |  |
| --- | --- |
| Date | 15 June 2025 |
| Team ID | LTVIP2025TMID44727 |
| Project Name | CleanTech: Transforming Waste Management with Transfer Learning |
| Maximum Marks | 5 Marks |

**Product Backlog, Sprint Schedule, and Estimation (4 Marks)**

Use the below template to create product backlog and sprint schedule

| **Sprint** | **Functional Requirement (Epic)** | **User Story Number** | **User Story / Task** | **Story Points** | **Priority** | **Team Member** |
| --- | --- | --- | --- | --- | --- | --- |
| Sprint-1 | Data Preparation | USN-1 | As a developer, I want to collect and organize waste classification dataset from Kaggle. | 2 | High | R.charan sai |
| Sprint-1 | Data Preparation | USN-2 | As a developer, I want to load and explore the dataset to understand structure and labels. | 1 | High | R.charan sai |
| Sprint-1 | Data Preprocessing | USN-3 | As a data scientist, I want to handle missing and null values effectively. | 3 | High | R.charan sai |
| Sprint-1 | Data Preprocessing | USN-4 | As a data scientist, I want to encode categorical labels for model training. | 2 | Medium | R.charan sai |
| Sprint-2 | Model Building | USN-5 | As a developer, I want to build a waste classifier using transfer learning (VGG16). | 5 | High | R.charan sai |
| Sprint-2 | Model Testing | USN-6 | As a QA, I want to evaluate the model's performance using accuracy and confusion matrix. | 3 | High | R.charan sai |
| Sprint-2 | Deployment | USN-7 | As a web developer, I want to build HTML UI pages for image upload and prediction results. | 3 | Medium | R.charan sai |
| Sprint-2 | Deployment | USN-8 | As a developer, I want to deploy the model using Flask and host it online. | 5 | High | R.charan sai |

## **Project Tracker, Velocity & Burndown Chart (4 Marks)**

### **Sprint Tracker**

| **Sprint** | **Total Story Points** | **Duration** | **Sprint Start Date** | **Sprint End Date (Planned)** | **Story Points Completed** | **Sprint Release Date (Actual)** |
| --- | --- | --- | --- | --- | --- | --- |
| Sprint-1 | 8 | 5 Days | 15 June 2025 | 20 June 2025 | 8 | 20 June 2025 |
| Sprint-2 | 16 | 5 Days | 20 June 2025 | 25 June 2025 | 16 | 17 June 2025 |

### **Velocity Calculation**

Formula:  
Velocity = Total Story Points Completed / Number of Sprints

Calculation:  
Velocity = (8 + 16) / 2 = 12 Story Points per Sprint

### **Average Velocity per Day (5-day sprints)**

Average Velocity per Day = 12 / 5 = 2.4 story points/day

### **Burndown Chart**

To track daily progress during a sprint, create a burndown chart:

* X-axis: Days (1–5)
* Y-axis: Remaining story points (starts at 8 or 16, drops to 0 by Day 5)
* Tools:
  + Excel / Google Sheets
  + [Visual Paradigm Chart Generator](https://www.visual-paradigm.com/scrum/scrum-burndown-chart/)
  + [Atlassian Burndown Guide](https://www.atlassian.com/agile/tutorials/burndown-charts)

## **References**

* [Agile Project Management – Atlassian](https://www.atlassian.com/agile/project-management)
* [Scrum with Jira](https://www.atlassian.com/agile/tutorials/how-to-do-scrum-with-jira-software)
* [Burndown Charts – Atlassian](https://www.atlassian.com/agile/tutorials/burndown-charts)