**Project Planning Phase**

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

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| --- | --- |
| Date | 15 February 2025 |
| Team ID | PNT2022TMID45799 |
| Project Name | TrafficTelligence: Advanced Traffic Volume Estimation with Machine 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 Members** |
| --- | --- | --- | --- | --- | --- | --- |
| Sprint-1 | Data Collection | USN-1 | As a developer, I want to collect and load the dataset into the system | 2 | High | Makasi Sri Lakshmi |
| Sprint-1 | Data Preprocessing | USN-2 | As a developer, I want to clean data and handle missing/categorical values | 3 | High | Makasi Sri Lakshmi |
| Sprint-1 | Feature Engineering | USN-3 | As a data scientist, I want to extract datetime-based features (hour, day, month, etc.) | 2 | Low | Makasi Sri Lakshmi |
| Sprint-1 | Model Building | USN-4 | As a data scientist, I want to build and train the ML model | 3 | Medium | Makasi Sri Lakshmi |
| Sprint-2 | Model Evaluation | USN-5 | As a data scientist, I want to evaluate the model (MAE, RMSE, R²) | 2 | High | Makasi Sri Lakshmi |
| Sprint-2 | Web UI | USN-6 | As a developer, I want to design a simple Flask web UI for model input/output | 3 | High | Makasi Sri Lakshmi |
| Sprint-2 | Visualization | USN-7 | As a user, I want to view traffic trends via charts (Chart.js) | 2 | Medium | Makasi Sri Lakshmi |
| Sprint-2 | Logging | USN-8 | As a developer, I want to store predictions in logs | 2 | Medium | Makasi Sri Lakshmi |
| Sprint-2 | Styling | USN-9 | As a UI/UX designer, I want to apply background image and CSS styling | 2 | Medium | Makasi Sri Lakshmi |

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

| **Sprint** | **Total Story Points** | **Duration** | **Sprint Start Date** | **Sprint End Date (Planned)** | **Story Points Completed (as on Planned End Date)** | **Sprint Release Date (Actual)** |
| --- | --- | --- | --- | --- | --- | --- |
| Sprint-1 | 20 | 6 Days | 24 Oct 2022 | 29 Oct 2022 | 20 | 29 Oct 2022 |
| Sprint-2 | 20 | 6 Days | 31 Oct 2022 | 05 Nov 2022 | 18 | 06 Nov 2022 |
| Sprint-3 | 20 | 6 Days | 07 Nov 2022 | 12 Nov 2022 | 15 | 13 Nov 2022 |
| Sprint-4 | 20 | 6 Days | 14 Nov 2022 | 19 Nov 2022 | 20 | 19 Nov 2022 |
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**⚡ Velocity Calculation**

 **Total Story Points Completed:** 20 + 18 + 15 + 20 = **73**

 **Number of Sprints:** 4

 **Average Velocity per Sprint:** 73 / 4 = **18.25 story points/sprint**

 **Average Velocity per Day:** 18.25 / 6 = **~3.04 story points/day**

**Burndown Chart:**

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile[software development](https://www.visual-paradigm.com/scrum/what-is-agile-software-development/) methodologies such as [Scrum](https://www.visual-paradigm.com/scrum/scrum-in-3-minutes/). However, burn down charts can be applied to any project containing measurable progress over time.

[**https://www.visual-paradigm.com/scrum/scrum-burndown-chart/**](https://www.visual-paradigm.com/scrum/scrum-burndown-chart/)

[**https://www.atlassian.com/agile/tutorials/burndown-charts**](https://www.atlassian.com/agile/tutorials/burndown-charts)

**Reference:**

[**https://www.atlassian.com/agile/project-management**](https://www.atlassian.com/agile/project-management)

[**https://www.atlassian.com/agile/tutorials/how-to-do-scrum-with-jira-software**](https://www.atlassian.com/agile/tutorials/how-to-do-scrum-with-jira-software)

[**https://www.atlassian.com/agile/tutorials/epics**](https://www.atlassian.com/agile/tutorials/epics)

[**https://www.atlassian.com/agile/tutorials/sprints**](https://www.atlassian.com/agile/tutorials/sprints)

[**https://www.atlassian.com/agile/project-management/estimation**](https://www.atlassian.com/agile/project-management/estimation)

[**https://www.atlassian.com/agile/tutorials/burndown-charts**](https://www.atlassian.com/agile/tutorials/burndown-charts)