# Project Planning Phase

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

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|---|---|
| Date | 18 October 2022 |
| Team ID | PNT2022TMID10674 |
| Project Name | Project - Machine Learning Based Vehicle Performance Analyzer |
| Maximum Marks | 8 Marks |

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

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|---|---|---|---|---|---|---|
| Sprint-1 | Data Collection | USN-1 | Download the dataset | 20 | High | 1 |
| Sprint-2 | Data Pre-processing | USN-2 | Import libraries and read the dataset | 4 | Medium | 1 |
| Sprint-2 | | USN-3 | Handle the missing value and label the encoding | 4 | Medium | 2 |
| Sprint-2 | | USN-4 | Split the dataset into Dependent and independent variables | 6 | Medium | 3 |
| Sprint-2 | | USN-5 | Split the dataset into train and test data | 6 | Medium | 4 |
| Sprint-3 | Model Building | USN-6 | Train the datasets to run smoothly and see an incremental improvement in the prediction rate for the available Machine Learning algorithms. | 5 | Low | 1 |
| Sprint-3 | | USN-7 | Build The Model With The Decision Tree Algorithm | 6 | Low | 2 |
| Sprint-3 | | USN-8 | Predict The Values | 5 | Low | 3 |
| Sprint-3 | | USN-9 | Model Evaluation | 4 | Low | 4 |
| Sprint-4 | Application Building | USN-10 | Building An Index. Html File | 5 | Low | 1,2,3,4 |

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|---|---|---|---|---|---|---|
| Sprint-4 | | USN-11 | Build Python Code | 5 | Low | 1,2,3,4 |
| Sprint-4 | | USN-12 | Run the app using flask | 5 | Low | 1,2,3,4 |
| Sprint-4 | | USN-13 | Output | 5 | Low | 1,2,3,4 |

**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 | 30 Oct 2022 |
| Sprint-2 | 20 | 6 Days | 31 Oct 2022 | 05 Nov 2022 | 20 | 06 Nov 2022 |
| Sprint-3 | 20 | 6 Days | 07 Nov 2022 | 12 Nov 2022 | 20 | 14 Nov 2022 |
| Sprint-4 | 20 | 6 Days | 14 Nov 2022 | 19 Nov 2022 | 20 | 20 Nov 2022 |

**Velocity:**

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{6} = 3.33$$

**Burndown Chart:**