

Project Planning Phase

Project Planning Template (Product Backlog, Sprint Planning, Stories, Storypoints)

Date	27 june 2025
Team ID	LTVIP2025TMID59882
Project Name	TrafficTelligence : Advanced Traffic Volume Estimation with Machine Learning
Maximum Marks	5 Marks

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

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task
Sprint-1	Projectsetup& Infrastructure	USN-1	Setupthedevelopmentenvironmentwiththerequiredtools and frameworkstostartthe project
Sprint-2	Datacollection	USN-2	Gatheradiversedatasetof Date, time, holidays and climatic conditions.
Sprint-2	datapreprocessing	USN-3	Preprocessthecollecteddatasetby removing outliers and null values etc. Exploreandevaluatedifferentdeeplearningarchitectures(e.g., Regressions) to select the most suitable model for the project.
Sprint-3	modeldevelopment	USN-4	traintheselectedmachinelearningmodelusingthepreprocessed datasetandmonitoritsperformanceonthevalidationset.
Sprint-3	Training	USN-5	The data set will be trained with suitable algorithms to improve the robustness and accuracy.
Sprint-4	modeldeployment&Integration	USN-6	deploythetrainedmachinelearningmodelasa webservice to make it accessible for users. Integrate the model'sAPIintoauser-friendlywebinterfaceforuserstoinput variables such as date, time, holidays etc and receive predicted volume results.
Sprint-5	Testing&quality assurance	USN-7	conduct thorough testing of the model and web interface to identify and report any issues or bugs. fine-tune the model hyperparametersandoptimizeitsperformancebasedonuser feedback and testing results.

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	1	3 Days	8 june 2025	12 june 2025	1	12 june 2025
Sprint-2	5	6 Days	7 une 2025	14 june 2025	5	11 june 2025

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-3	10	6 Days	15 june 2025	25 june 2025	10	20 june 2025
Sprint-4	1	5 Days	17 june 2025	22 june 2025	1	23 june 2025
Sprint-5	1	4 Days	19 june 2025	23 june 2025	1	25 june 2025

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)

$$AV = \frac{\text{sprint duration}}{\text{velocity}} = \frac{20}{10} = 2$$

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 methodologies such as Scrum. 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.atlassian.com/agile/tutorials/burndown-charts>

Reference:

<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/epics>

<https://www.atlassian.com/agile/tutorials/sprints>

<https://www.atlassian.com/agile/project-management/estimation>

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