Project Planning Phase

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

Date	16 JUNE 2025
Team ID	LTVIP2025TMID33800
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
Sprint-1	Data Collection & Preprocessing	USN-1	As a developer, I want to collect historical traffic data from various sources (sensors, APIs).	3	High
Sprint-1	Data Collection & Preprocessing	USN-2	As a developer, I want to preprocess data to handle missing values and normalize formats	5	High
Sprint-2	Model Development	USN-3	As a data scientist, I want to build a machine learning model to predict traffic volumes	8	High
Sprint-2	Real-Time Prediction & API Deployment	USN-4	As a data scientist, I want to validate and test model accuracy using test datasets	4	Medium
Sprint-3	Real-Time Prediction Deployment	USN-5	As a user, I want to get real-time traffic estimates via a dashboard	5	High
Sprint-3	Visualization & Use Case Integration	USN-6	As a developer, I want to deploy the model and create APIs for frontend access	6	High
Sprint -4	Visualization & Use Case Integration	USN-7	As a developer, I want to deploy the model and create APIs for frontend access	3	Medium

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority
Sprint-4	Visualization & Use Case Integration	USN-8	As a commuter, I want personalized route guidance based on predicted traffic	5	High

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	8	5 Days	June 1, 2025	June 5, 2025	6	June 5, 2025
Sprint-2	12	5 Days	June 8, 2025	June 12, 2025	7	June 12, 2025
Sprint-3	11	5 Days	June15, 2025	June 19, 2025	6	June 19, 2025
Sprint-4	8	5 Days	June 22, 2025	June 26, 2025	5	June 26, 2025

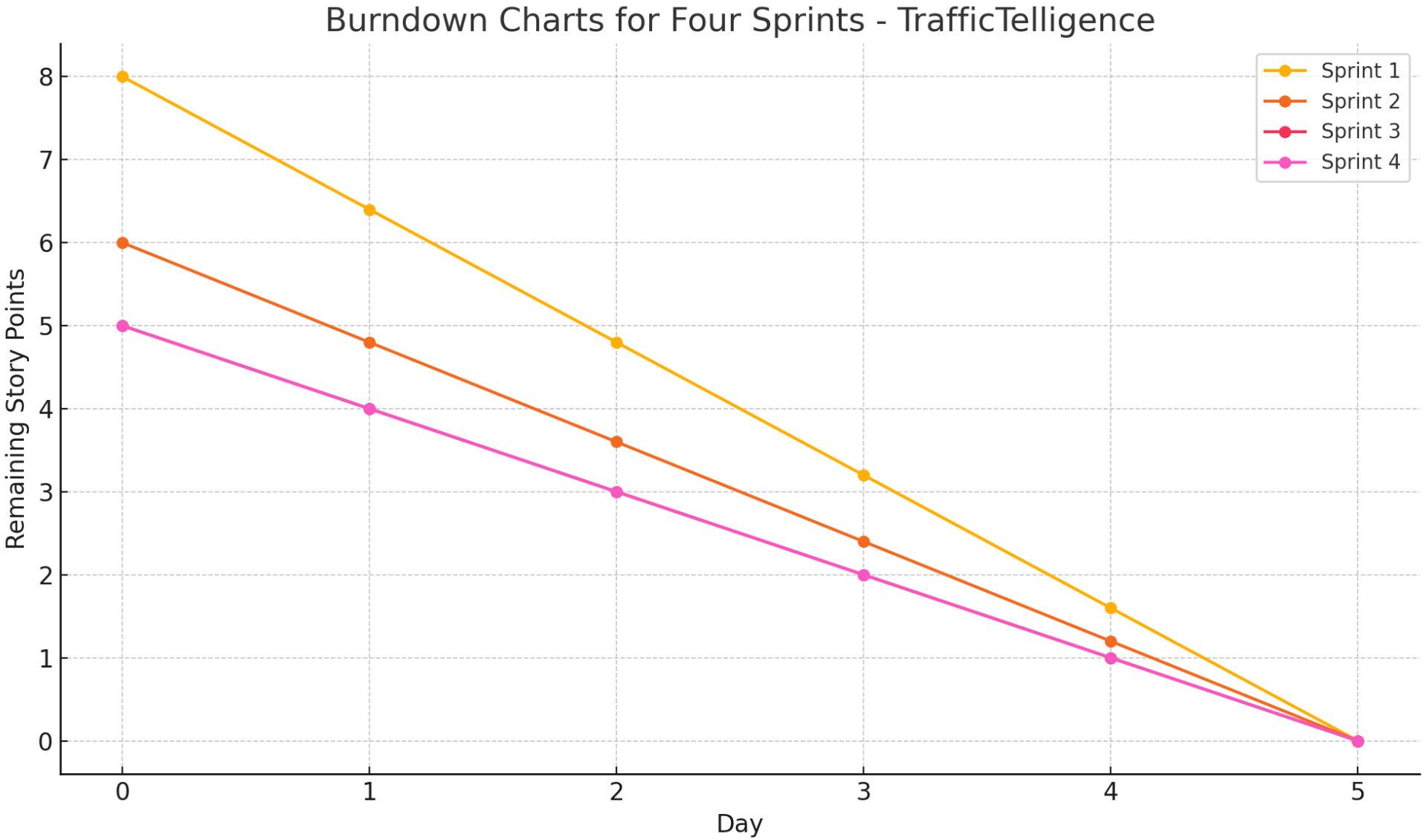
Velocity:

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)

$$AV = \text{sprint duration} \ / \text{velocity} = 1.2$$

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.


Burndown Charts for Four Sprints - TrafficTelligence
Remaining Story Points
Day
Sprint 1
Sprint 2
Sprint 3
Sprint 4
0
1
2
3
4
5
6
7
8

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

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