Project Planning Phase

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

Date	13th November 2023
Team ID	TEAM-592016
Project Name	Smart Home -Temperature Prediction
Maximum Marks	8 Marks

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

Use the below template to create a product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Project setup & Infrastructure	USN-1	Set up the development environment with the required tools and frameworks to start the temperature prediction project	1	High	Hinduja
Sprint-1		USN-2	Gather the sensor data generated by the smart Wi-Fi thermostats from The University of CEU Cardenal Herrera (CEU-UCH)-Spain.	2	High	Harshavardhan
Sprint-2	Data Preprocessing	USN-3	Preprocess the collected dataset by handling missing values, outliers, and scaling or normalizing the data.	2	High	Harshavardhan
Sprint-3	Model Development & Training	USN-4	Train different regression models such as Linear Regression and Random Forest on your pre-processed data.	3	High	Abhilash
Sprint-3		USN-5	Evaluate each model's performance using appropriate metrics such as Mean Absolute Error (MAE), Root Mean Squared Error (RMSE)	4	High	Samhitha
Sprint-4	Model Selection & Deployment	USN-6	Compare the performance of your models and select the best one. Save your model in .pkl format for future use.	6	medium	Samhitha

Sprint-4		USN-7	Integrate your model with a Flask application for user interaction.	1	medium	Hinduja
Sprint-5	Application Deployment & Testing	USN-8	Deploy your application on IBM Cloud or a similar platform. Conduct thorough testing of the model and web interface to identify and report any issues or bugs.	1	medium	Abhilash

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	3	2 Days	24 Oct 2023	26 Oct 2023	3	26 Oct 2022
Sprint-2	2	6 Days	27 Oct 2023	02 Nov 2023	2	02 Nov 2023
Sprint-3	7	7 Days	03 Nov 2023	10 Nov 2023	7	10 Nov 2023
Sprint-4	7	6 Days	11 Nov 2023	17 Nov 2023	7	17 Nov 2023
Sprint-5	1	2 Days	18 Nov 2023	21 Nov 2023	1	21 Nov 2023

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)

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

AV= 23/20 = 1.105

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