

Project Planning Phase

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

Date	18 October 2022
Team ID	Team-591680
Project Name	Diabetes Prediction Using Machine Learning
Maximum Marks	8 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	Project setup & Infrastructure	USN-1	Set up the environment with the requires tools and frameworks to start the hospital readmission prediction project.	2	High	K. Manohar
Sprint-1	Development environment	USN-2	Make all necessary arrangements to complete the project.	1	High	M. Raghu
Sprint-2	Data collection	USN-3	Gather a diverse dataset of readmissions containing different types of features for training the Machine learning model.	2	Low	S. Bhaskar
Sprint-3	Data preprocessing	USN-4	Preprocess the collected dataset by handling all types of null values, missing values and selecting correct features for predicting and selecting correct model.	2	Medium	S. Bhaskar
Sprint-3	Model development	USN-5	Train the selected machine learning model using pre-processed dataset and monitor its performance on the validation set.	1	High	K. Manohar
Sprint-4	Training	USN-6	Implement data augmentation techniques to improve the model's robustness and accuracy	2	High	M. Raghu

Sprint-5	Model deployment & Integration	USN-7	Deploy the trained machine learning model as an API or web service to make it accessible for readmission prediction. Integrate the models API into user-friendly web interface for users to give input and predict.	1	Medium	K. Naveen
Sprint-5	Testing & quality assurance	USN-8	Conduct thorough testing of the model and web interface to identify and report any issues or bugs. Optimize its performance based on user feedback and testing results	2	High	K. Naveen

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	4 Days	28 Oct 2022	1 Oct 2022	20	1 Oct 2022
Sprint-2	5	4 Days	2 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint-3	10	7 Days	6 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint-4	1	3 Days	13 Nov 2022	16 Nov 2022	20	16 Nov 2022
Sprint-5	1	2 Days	17 Nov 2022	19 Nov 2022	20	19 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)

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