# Project Planning Phase

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

|  |  |
| --- | --- |
| Date | 25th june 2025 |
| Team ID | LTVIP2025 TMID35397 |
| Project Name | Revolutionizing Liver Care : Predicting Liver Cirrhosis Using Advanced Machine Learning Techniques |
| Maximum Marks | 20 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 development environment with the required tools and frameworks to begin the project: Revolutionizing Liver Care – Predicting Liver Cirrhosis Using Advanced Machine Learning Techniques." | 1 | High | Burhan |
| Sprint-2 | Data collection | USN-2 | Gather a diverse dataset of patient medical history, laboratory results, lifestyle factors, and clinical observations. | 2 | High | Burhan |
| Sprint-2 | data preprocessing | USN-3 | "As part of Revolutionizing Liver Care: Predicting Liver Cirrhosis Using Advanced Machine Learning Techniques, preprocess the collected dataset by handling missing values, removing outliers, and standardizing inputs, then explore and evaluate various machine learning and deep learning models (e.g., regression-based architectures) to identify the most suitable approach for accurate cirrhosis prediction." | 3 | High | Sai Harshini |
| Sprint-3 | model development | USN-4 | "As part of Revolutionizing Liver Care: Predicting Liver Cirrhosis Using Advanced Machine Learning Techniques, train the selected machine learning model using the preprocessed dataset and continuously monitor its performance on the validation set to ensure accuracy and reliability in early cirrhosis prediction." | 4 | High | Sai Harshini |
| Sprint-3 | Training | USN-5 | "As part of Revolutionizing Liver Care: Predicting Liver Cirrhosis Using Advanced Machine Learning Techniques, the dataset will be trained using suitable machine learning algorithms to enhance the model's robustness and prediction accuracy." | 6 | medium | Bhanu |
| Sprint-4 | model deployment & Integration | USN-6 | "Deploy the trained model as a web service with a user-friendly interface, enabling healthcare professionals to input patient data and receive cirrhosis risk predictions as part of Revolutionizing Liver Care." | 1 | medium | Bhanu |
| Sprint-5 | Testing & quality assurance | USN-7 | "Test and refine the predictive model and web interface to fix issues, tune hyperparameters, and optimize performance for accurate cirrhosis prediction as part of Revolutionizing Liver Care." | 1 | medium | Burhan |

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 | 1 Days | 15 june 2025 | 16 june 2025 | 1 | 16 june 2025 |
| Sprint-2 | 5 | 1 Days | 16 june 2025 | 17 june 2025 | 1 | 17 june 2025 |
| Sprint-3 | 10 | 4 Days | 17 june 2025 | 20 june 2025 | 10 | 20 june 2025 |
| Sprint-4 | 1 | 5 Days | 20 june 2025 | 25 june 2025 | 1 | 25 june 2025 |
| Sprint-5 | 1 | 2 Days | 25 june 2025 | 27 june 2025 | 1 | 27 june 2025 |

Velocity:

Imagine we have a 29-days 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= 19/3.8 = 5