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

| Date | 25 October 2023 |
|---|---|
| Team ID | Team-591884 |
| Project Name | Hospital Readmission prediction using ML |
| 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 | V. Sukumar |
| Sprint-1 | Development environment | USN-2 | Make all necessary arrangements to complete the project. | 1 | Medium | V. Sukumar |
| Sprint-2 | Data collection | USN-3 | Gather a diverse dataset of readmissions containing different types of features for training the Machine learning model. | 2 | High | K. Lakshmi Prasanna |
| 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 | High | K. Lakshmi Prasanna, V. Sukumar |
| 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 | Medium | M. Sumanth |
| Sprint-4 | Training | USN-6 | Implement data augmentation techniques to improve the models robustness and accuracy. | 2 | High | M. Sumanth |

| 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 | V. Saikrupa Anjali |
|---|---|---|---|---|---|---|
| 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 | V. Saikrupa Anjali |

## 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 | 18 October 2023 | 21 Oct 2023 | 20 | 21 Oct 2023 |
| Sprint-2 | 5 | 3 Days | 22 October 2023 | 25 Oct 2023 | 20 | 25 Oct 2023 |
| Sprint-3 | 10 | 7 Days | 26 October 2023 | 2 Nov 2023 | 20 | 2 Nov 2023 |
| Sprint-4 | 1 | 3 Days | 3  November 2023 | 6 Nov 2023 | 20 | 6 Nov 2023 |
| Sprint-5 | 1 | 2 Days | 7 November 2023 | 9 Nov 2023 | 20 | 9 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=22/20=1.1**

**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.
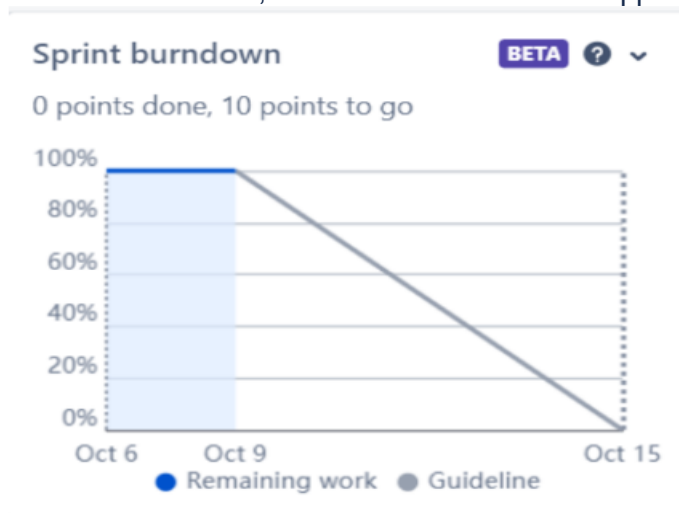
# Backlog

| | |
|---|---|
| 🔍 | 👥 Epic ⌄    ☁ Import work    📈 Insights    ⚙ View settings |

## Epic ✕

**Issues without epic**

> 🟪 Project setup & Infrastructure

> 🟪 Data collection

> 🟪 Data preprocessing

> 🟪 Model development

> 🟪 Training

> 🟪 Model development

> 🟪 Testing

**+ Create epic**

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⌄ **SCRUM Sprint 1** 18 Oct – 21 Oct (8 issues)    0 0 3   **Complete sprint** •••

complete all setup for project development.

| 🔖 | SCRUM-8 Implement data augmentation techniques to improve the models rob... | MODEL DEVE... | DONE ⌄ | - | S |
| 🔖 | SCRUM-10 Conduct thorough testing of the model and web interface to identif... | TESTING | DONE ⌄ | - | 🧑 |
| 🔖 | SCRUM-2 Set up the environment with the requires tools and frameworks to sta... | PROJECT SET... | DONE ⌄ | 2 | S |
| 🔖 | SCRUM-9 Deploy the trained machine learning model as an API or web service t... | MODEL DEVE... | DONE ⌄ | - | S |
| 🔖 | SCRUM-7 Train the selected machine learning model using pre-processed datas... | TRAINING | DONE ⌄ | - | S |
| 🔖 | SCRUM-3 Make all necessary arrangements to complete the project | PROJECT SET... | DONE ⌄ | 1 | 🧑 |
| 🔖 | SCRUM-6 Preprocess the collected dataset by handling all types of null values, ... | DATA PREPRO... | DONE ⌄ | - | 🧑 |
| 🔖 | SCRUM-5 Gather a diverse dataset of readmissions containing different types of... | DATA COLLEC... | DONE ⌄ | - | 🧑 |

+ Create issue

> **Backlog** (0 issues)

💡 Quickstart ✕

# SCRUM Sprint 1

complete all setup for project development.

⚡ ☆ 🕐 0 days

🔍 (search) 😀 Ⓢ 😀 Ⓢ 👤➕ Epic ⌄

GROUP BY  None ⌄  ☁ Import work

## TO DO

## IN PROGRESS

## DONE 8 ✓

Implement data augmentation techniques to improve the models robustness and accuracy.

**MODEL DEVELOPMENT**

🟩 ~~SCRUM-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

**TESTING**

🟩 ~~SCRUM-10~~ ✓ 😀

Set up the environment with the requires tools and frameworks to start the hospital readmission

➕

# Timeline

Give feedback        Share        Export

Status category ⌄        Epic ⌄        View set

| | T | NOV | DEC | JAN '24 |
|---|---|---|---|---|
| **Sprints** | SC... | | | |
| > ⚡ SCRUM-1 Project setup & Infrastructure | ▮ | | | |
| > ⚡ SCRUM-4 Data collection | ▮ | | | |
| > ⚡ SCRUM-11 Data preprocessing | ▮ | | | |
| > ⚡ SCRUM-12 Model development | ▮ | | | |
| > ⚡ SCRUM-13 Training | ▮ | | | |
| > ⚡ SCRUM-14 Model development | ▮ | | | |
| > ⚡ SCRUM-15 Testing | ▮ | | | |
| + Create Epic | | | | |

Today    Weeks    Months    Quarters    ⓘ    ⤢        💡 Quickstart