

## PROJECT PLANNING PHASE

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

|               |  |
|---------------|--|
| Team ID       | PNT2022TMID48809   |
| Project Name  | Project - Detecting Parkinson's Disease Using Machine Learning |
| Maximum Marks | 8 Marks  |

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

The below template shows the product backlog and sprint schedule

| Sprint   | Functional Requirement (Epic) | User Story Number | User Story / Task   | Story Points | Priority | Team Members   |
|----------|-------------------------------|-------------------|---|--------------|----------|--|
| Sprint-1 | Upload Images                 | USN-1             | As a user, I can upload the images in the website in order to obtain the prediction result of Parkinson's disease | 2            | High     | 1. Manoj Kumar S<br>2. Sivabalan P<br>3. Shakul Kani N |

|          |                 |       |  |   |      |   |
|----------|-----------------|-------|--|---|------|---|
| Sprint-4 | Test Vital Page | USN-2 | As a user, I will get the prediction result and accuracy on the test vital page. | 3 | High | 1. Manoj Kumar S<br>2. Sivabalan P<br>3. Mohamed Nainar A |
|----------|-----------------|-------|--|---|------|---|

| <b>Sprint</b> | <b>Functional Requirement (Epic)</b> | <b>User Story Number</b> | <b>User Story / Task</b>  | <b>Story Points</b> | <b>Priority</b> | <b>Team Members</b>   |
|---------------|--------------------------------------|--------------------------|---|---------------------|-----------------|---|
| Sprint-2      | Dashboard                            | USN-3                    | Dashboard displays the symptoms, causes and medications for the Parkinson disease   | 2                   | Low             | 1. Manoj Kumar S<br>2. Shakul Kani N<br>3. Mohamed Nainar A |
| Sprint-1      | Data Collection                      | USN-4                    | As an Administrator, I need to collect data (images of spirals and waves drawn by healthy people and Parkinson's patients). | 2                   | High            | 1. Sivabalan P<br>2. Shakul Kani N<br>3. Mohamed Nainar A   |

|               |                                      |                          |   |                     |                 |                                       |
|---------------|--------------------------------------|--------------------------|---|---------------------|-----------------|---------------------------------------|
| Sprint-1      | Data Pre-Processing                  | USN-5                    | As an Administrator, I should clean my data and prepare it for model building by doing pre-processing activities such as resizing, visualizing the dataset and converting from RGB to grayscale | 2                   | High            | 1. Manoj Kumar S<br>2. Shakul Kani N  |
| Sprint-2      | Model Building                       | USN-6                    | As an Administrator, I need to build the model using Random Forest Classifier for spiral images and Convolutional Neural Networks (CNN) for wave images   | 3                   | High            | 1. Sivabalan P<br>2. Mohamed Nainar A |
| <b>Sprint</b> | <b>Functional Requirement (Epic)</b> | <b>User Story Number</b> | <b>User Story / Task</b>  | <b>Story Points</b> | <b>Priority</b> | <b>Team Members</b>                   |
| Sprint-3      | Deployment of Model                  | USN-7                    | As an Administrator, I need to deploy the Machine Learning model that was built.  | 2                   | Medium          | 1. Sivabalan P<br>2. Shakul Kani N    |

|          |   |       |  |   |      |   |
|----------|---|-------|--|---|------|---|
| Sprint-3 | Building Frontend of the application          | USN-8 | As an Administrator, I need to build the website for the application using HTML, CSS etc.              | 2 | High | 1. Shakul Kani N<br>2. Mohamed Nainar A |
| Sprint-4 | Connecting the ML model, Frontend and Backend | USN-9 | As an Administrator, I can integrate the deployed model and web application using python flask server. | 3 | High | 1. Manoj Kumar S<br>2. Shakul Kani N    |

#### 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 | 20                 | 6 Days   | 24 Oct 2022       | 29 Oct 2022               | 20  | 29 Oct 2022                  |
| Sprint-2 | 20                 | 6 Days   | 31 Oct 2022       | 05 Nov 2022               | 20  | 05 Nov 2022                  |
| Sprint-3 | 20                 | 6 Days   | 07 Nov 2022       | 12 Nov 2022               | 20  | 12 Nov 2022                  |
| Sprint-4 | 20                 | 6 Days   | 14 Nov 2022       | 19 Nov 2022               | 20  | 14 Nov 2022                  |

### Velocity:

For example, 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)

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

In our project, we have a 6-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)

$$AV = \frac{\text{Sprint Duration}}{\text{Velocity}} = \frac{20}{6} = 3.3 \text{ (approx.)}$$

### 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.

A burndown chart is almost a “must” have tool for a Scrum Team for the following main reasons:

- Monitoring the project scope creep
- Keeping the team running on schedule
- Comparing the planned work against the team progression.

