

## Project Planning Phase

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

Date	18 October 2022
Team ID	PNT2022TMID49992
Project Name	Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy

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

Use the below template to create product backlog and sprint schedule

Release	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Data collection	Task-1	To build a Deep learning Model which begins with the process of splitting data into training and testing set	7	High	Ameenah Sahiftha Parveen
Sprint-1	Data preprocessing	Task-2	We import the required libraries for preprocessing. We instantiate the Image Data Generator class to configure and augment different types of image data	4	High	Narayani
Sprint-1	Data preprocessing	Task-3	Application of the Image Data Generator to the Train and Test Set.	6	Medium	Ameenah Sahiftha Parveen
Sprint-1	Building Homepage	USN-1	As a user, she will be given a brief description in the homepage.	3	High	Narayani, Ameenah Sahiftha Parveen
Sprint-2	Feature Extraction	Task-4	Build a CNN Model and only use it as a feature extraction by freezing the convolution blocks.	8	High	Narayani, Ameenah Sahiftha Parveen
Sprint-2	Building the layers	Task-5	Adding of dense layers with the aid of Keras Addition of Optimizer, choosing loss function and the Metrics.	6	High	Narayani, Ameenah Sahiftha Parveen
Sprint-2	Train, Save, Test	Task-6	To train the model with the configured neural network and save the model. Test the built model against the testing dataset.	5	High	Narayani, Ameenah Sahiftha Parveen

Release	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-2	Building Registration Page	USN-2	As a user, she will be able to register for the application	7	High	Ameenah Sahiftha Parveen,Narayani
Sprint-3	Create Service Instance	Task-7	Configure the location of resources, such as web server, and Cloud Storage for an application.	4	Medium	Bharathi
Sprint-3	Configuring credentials and creating DB	Task-8	Define the credentials that are required to access the services offered by IBM Cloudant and add users to access the DB.	4	High	Kalaivani
Sprint-3	Create tables in DB	Task-9	Structure the required tables with necessary attributes in Cloudant DB.	5	Medium	Bharathi
Sprint-3	Building Login Page	USN-3	As a user, she will be able to login using her credentials	6	High	Kalaivani
Sprint-4	Building Prediction Page	USN-4	As a user, she will be able to receive the diagnosis on her diabetic retinopathy.	4	High	Ameenah Sahiftha Parveen,Narayani
Sprint-4	Building Logout Page	USN-5	As a user, she will be able to logout of her account in this page.	5	High	Kalaivani, Bharathi
Sprint-4	Build Python Code	Task-9	Import the libraries and Initialize the necessary modules	7	High	Bharathi, Narayani
Sprint-4		Task-10	Use the database using initiated client and rendering HTML pages	8	Medium	Narayani, Ameenah saiftha parveen
Sprint-4		Task-11	Configuring the registration, login pages and validating the credentials	5	High	Bharathi, Narayani
Sprint-4		Task-12	Showcasing the model's prediction on UI.	4	High	Kalaivani, Bharathi
Sprint-4	Run the application	Task-13	Run the application in the anaconda prompt to check the application	5	Medium	Bharathi, Narayani
Sprint-4		Task-14	In the homepage, after logging on using credentials, upload the image to predict the diagnosis on diabetic retinopathy.	4	High	Kalaivani, Ameenah saiftha parveen
Sprint-4	Train Model on IBM	Task-15	train the model on IBM and integrate it with the flask Application.	3	High	Bharathi,Kalaivani,Narayani,Ameenah saiftha parveen

**Project Tracker, Velocity & Burn down 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	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)

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