Project Planning Phase

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

Date	18 October 2022
Team ID	IPNT2022TMID22690
Project Name	Exploratory Analysis of RainFall Data in India for Agriculture
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	Data Collection	Task-1	The data collection will be done by downloading the weatherAUS dataset which was available. This dataset will be used to train the machine learning model.	4	Medium	Monikka.R
Sprint-1	Data Analysis	Task-2	We study the dataset, by which we can view the trends and patterns in it.	6	Medium	Kavipriya.E
		USN-1	If I enter a particular region, I should be able to view the rainfall records of the past month.			
Sprint-1	Data Pre-processing	Task-3	To do pre-preprocessing we will perform data cleaning, removing noisy data and do the exploratory data analysis	7	Medium	Lavanya.J Arthika.S
		USN-2	The dataset must have read-able values and non-null values.			

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Data Visualization	Task-4	Graphs, pie-charts, bar plots will be used to visualize the data for better understanding	6	Medium	Kaven kumar.R Monikka.R
		USN-3	It should clearly provide graphical information on the difference in rainfall levels region and duration wise.			
Sprint-1	Feature Scaling	Task-5	Before training our dataset we will want our data in normalised and standardised form. For this we will adopt certain normalization techniques	7	Medium	Monikka.R Arthika.S
		USN-4	Rainfall levels for each region must be in range.			
Sprint-2	Splitting data into train and test	Task-6	We split the entire dataset into train and test dataset.	3	Low	Lavanya.J
Sprint-2	Training and testing the model	Task-7	Training of the model is done after model creation.	13	High	Monikka.R Arthika.S lavanya.J Kavipriya.E Kaven kumar
		USN-5	The prediction should help me safeguard my crops and produce before heavy rain storms.			
Sprint-2	Save the model	Task-8	The model must be saved after fully training it, so that it can be used directly in the web app.	2	Low	Kaven kumar
Sprint-2	Prediction web page HTML code	Task-9	Building Home/Front page using HTML, CSS and JS.	6	High	Arthika.S
		USN-6	The web page should be user-friendly, load quickly and very interactive.			
Sprint-2	Model evaluation	Task-10	Evaluating different models by comparing their accuracy, precision and recall.	6	Medium	Kavipriya.E
		USN-7	The model should be best inorder to get the fastest prediction results.			

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-3	Remaining web pages HTML code	Task-11	Further HTML pages will be developed using the same user interface and will be connected to the main page.	12	High	Lavanya.J Monikka.R Arthika.S
		USN-8	The web page should be user-friendly, load quickly and very interactive.			
Sprint-3	Python code for building the web-application	Task-12	Backend of the web page will be done using python.Like sending data to and from servers, processing data and communicating with databases, and ensuring security.	18	High	kavipriya lavanya kaven kumar
		USN-9	The code should be short and efficient.			
Sprint-4	Train the model on IBM cloud	Task-13	Using cloud IBM Watson to store our machine learning model and connect it to the web page.	18	High	Arthika.S Monikka.R Kaven kumar
Sprint-4	Integrate Flask with scoring end points	Task-14	Integrating the web page with the ML model using flask.	12	High	Kaven kumar Arthika.S Lavanya Kavipriya.E

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	30	6 Days	24 Oct 2022	29 Oct 2022	30	29 Oct 2022
Sprint-2	30	6 Days	31 Oct 2022	05 Nov 2022	30	05 Nov 2022
Sprint-3	30	6 Days	07 Nov 2022	12 Nov 2022	30	12 Nov 2022
Sprint-4	30	6 Days	14 Nov 2022	19 Nov 2022	30	19 Nov 2022

Velocity:

We have a 6-day sprint duration and the velocity of the team is 30 (points per sprint). So the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{\text{Sprint Duration}}{\text{Velocity}} = \frac{30}{6} = 5$$