

PROJECT PLANNING AND SCHEDULING

Date	15 November 2022
Team ID	PNT2022TMID13084
Project Name	Flight Delay Prediction Using Machine Learning

PROJECT PLANNING & SCHEDULING

Sprint Planning & Estimation

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	4	6 Days	27 October 2022	01 November 2022	4	01 November 2022
Sprint-2	4	6 Days	02 November 2022	07 November 2022	4	07 November 2022
Sprint-3	4	6 Days	08 November 2022	13 November 2022	4	13 November 2022
Sprint-4	4	6 Days	14 November 2022	19 November 2022	4	19 November 2022

Velocity:

We have a 24-day sprint duration, and the velocity of the team is 4 (points per sprint). Thus the team's average velocity (AV) per iteration unit (story points per day) is as follows

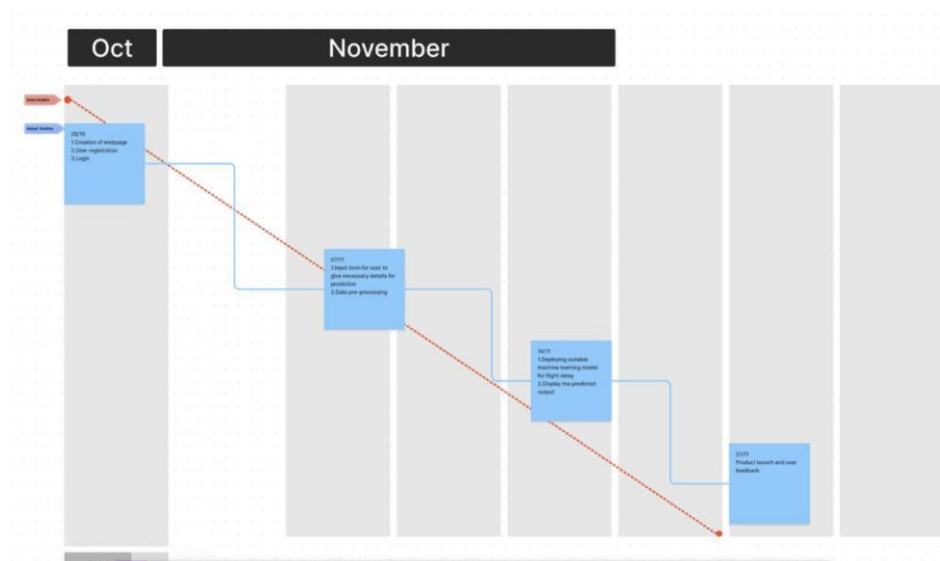
$$AV = \text{sprint duration} / \text{velocity}$$

$$= 24/16$$

$$= 1.5$$

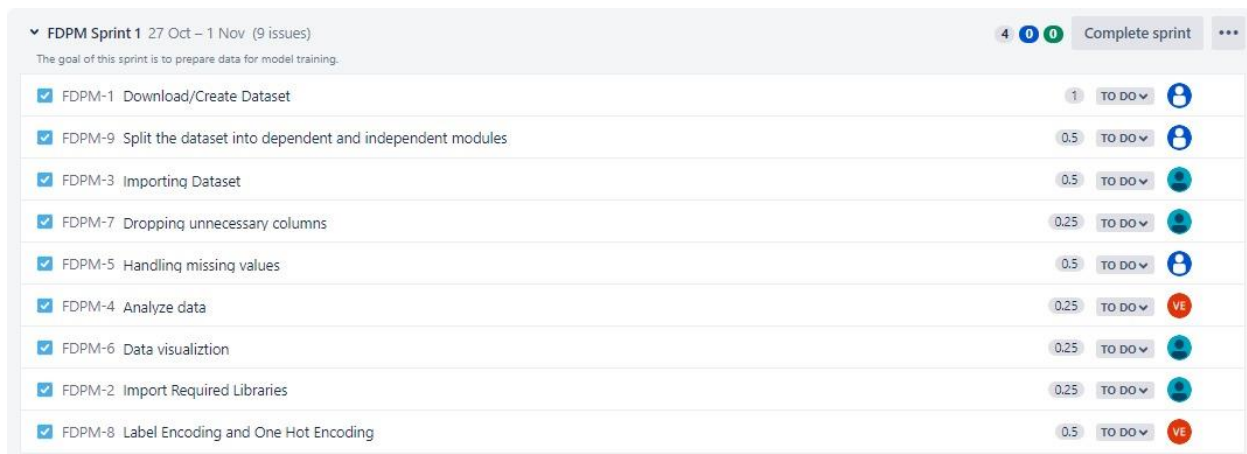
Sprint Delivery Schedule

Burn down chart:



Burndown Chart

Reports from JIRA



▼ **FDPM Sprint 1** 27 Oct – 1 Nov (9 issues)
The goal of this sprint is to prepare data for model training.

✓ FDPM-1 Download/Create Dataset	1	TO DO	👤
✓ FDPM-9 Split the dataset into dependent and independent modules	0.5	TO DO	👤
✓ FDPM-3 Importing Dataset	0.5	TO DO	👤
✓ FDPM-7 Dropping unnecessary columns	0.25	TO DO	👤
✓ FDPM-5 Handling missing values	0.5	TO DO	👤
✓ FDPM-4 Analyze data	0.25	TO DO	👤
✓ FDPM-6 Data visualization	0.25	TO DO	👤
✓ FDPM-2 Import Required Libraries	0.25	TO DO	👤
✓ FDPM-8 Label Encoding and One Hot Encoding	0.5	TO DO	👤

Tasks to be performed in Sprint 1

The above figure displays the various tasks to be performed in sprint 1. The goal of the sprint 1 is to prepare data for model training. There are nine issues that need to be addressed in the sprint 1. The story points of each issue is mentioned in the above diagram.

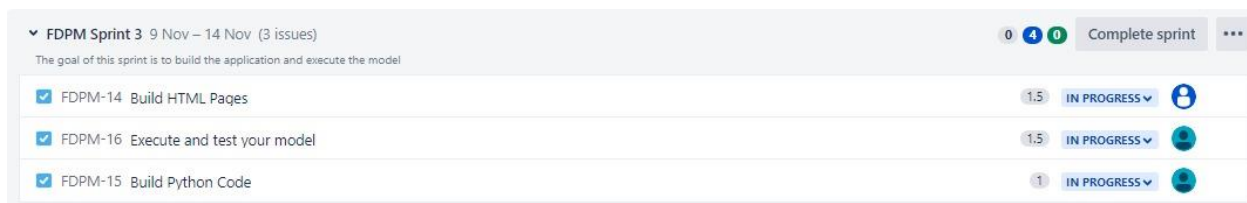


▼ **FDPM Sprint 2** 2 Nov – 7 Nov (4 issues)
The goal of this sprint is to train and save the model.

✓ FDPM-10 Split the dataset into train and test dataset	0.75	IN PROGRESS	👤
✓ FDPM-11 Training and testing the model using decision tree classifier	1	IN PROGRESS	👤
✓ FDPM-12 Model Evaluation	1	IN PROGRESS	👤
✓ FDPM-13 Saving the Model	0.25	IN PROGRESS	👤

Tasks to be performed in Sprint 2

The above figure displays the various tasks to be performed in sprint 2. The goal of the sprint 2 is to train and save the model. There are four issues that need to be addressed in the sprint 2. The story points of each issue are mentioned in the above diagram.



▼ **FDPM Sprint 3** 9 Nov – 14 Nov (3 issues)
The goal of this sprint is to build the application and execute the model

✓ FDPM-14 Build HTML Pages	1.5	IN PROGRESS	👤
✓ FDPM-16 Execute and test your model	1.5	IN PROGRESS	👤
✓ FDPM-15 Build Python Code	1	IN PROGRESS	👤

Tasks to be performed in Sprint 3

The above figure displays the various tasks to be performed in sprint 3. The goal of the sprint 3 is to build the application and execute the model. There are three issues that need to be addressed in the sprint 3. The story points of each issue are mentioned in the above diagram.

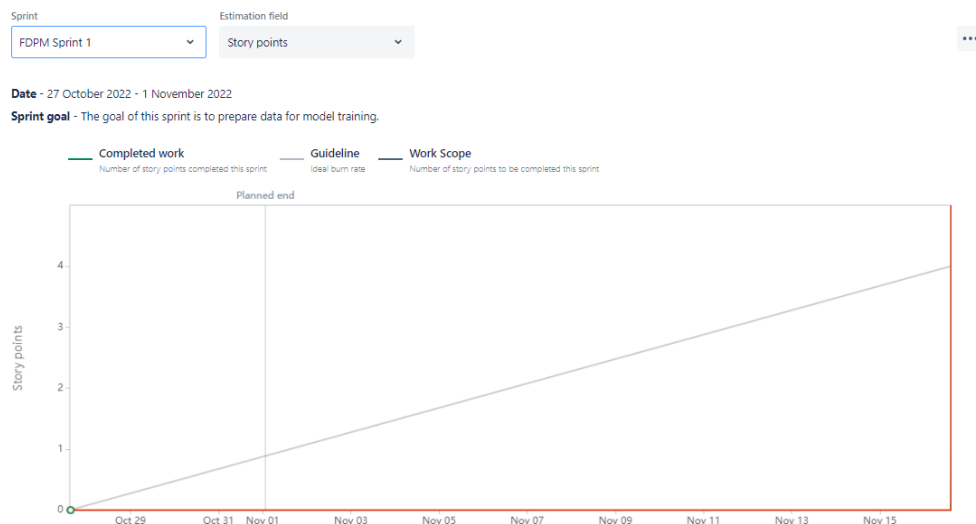
FDPM Sprint 4 15 Nov – 19 Nov (3 issues)			0	4	0	Complete sprint	...
The goal of this sprint is to integrate the model with the application							
<input checked="" type="checkbox"/>	FDPM-17 Register for IBM Cloud		0.25	IN PROGRESS			...
<input checked="" type="checkbox"/>	FDPM-18 Train the ML model on IBM		1.75	IN PROGRESS			
<input checked="" type="checkbox"/>	FDPM-19 Integrate Flask with scoring end point		2	IN PROGRESS		VE	

Tasks to be performed in Sprint 4

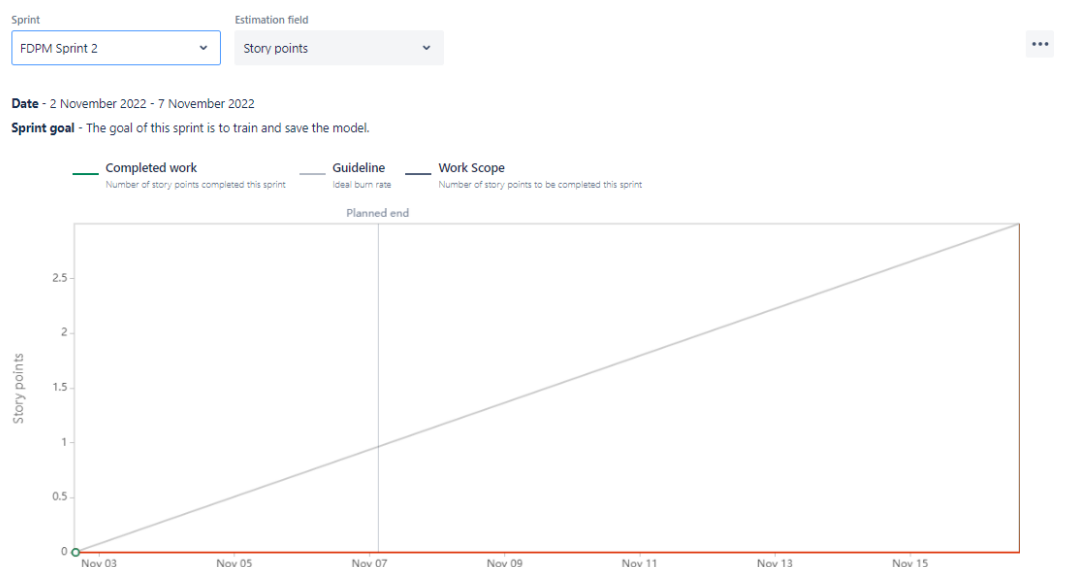
The above figure displays the various tasks to be performed in sprint 4. The goal of the sprint 4 is to integrate the model with the application. There are three issues that need to be addressed in the sprint 3. The story points of each issue are mentioned in the above diagram.

Burnup report

Burnup report maintains the sprint's health by identifying problems such as scope creep or planned path deviation. The burnup reports of each sprint are given below:



Burnup Report of Sprint 1



Burnup Report of Sprint 2

Sprint

FDPM Sprint 3

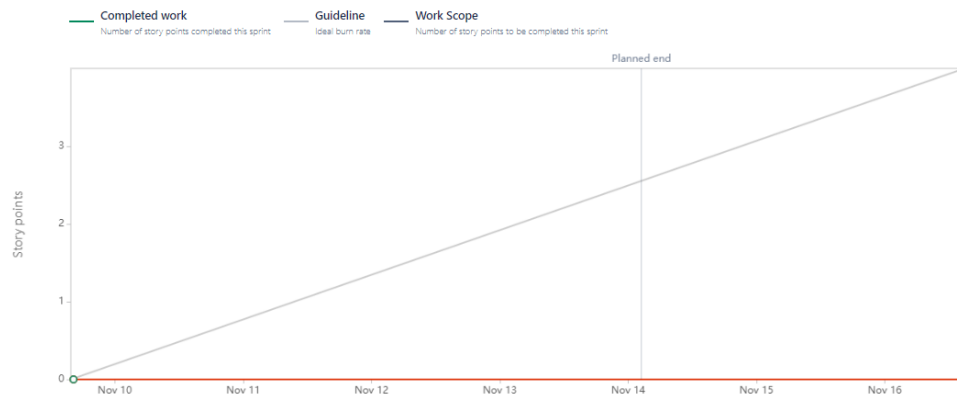
Estimation field

Story points

...

Date - 9 November 2022 - 14 November 2022

Sprint goal - The goal of this sprint is to build the application and execute the model



Burnup Report of Sprint 3

Sprint

FDPM Sprint 4

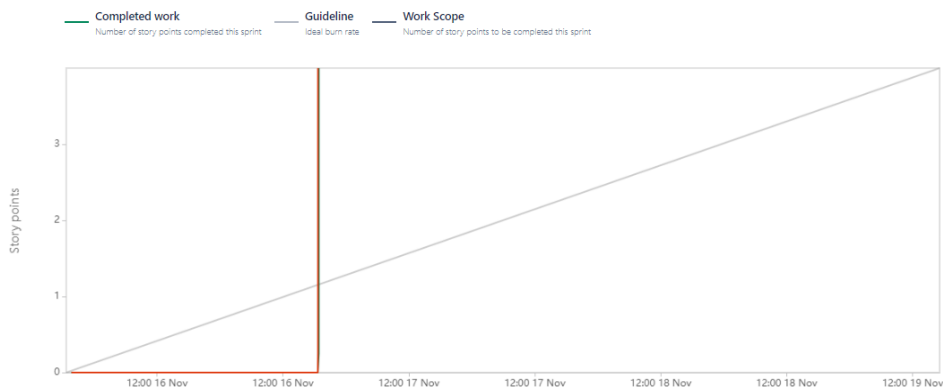
Estimation field

Story points

...

Date - 15 November 2022 - 19 November 2022

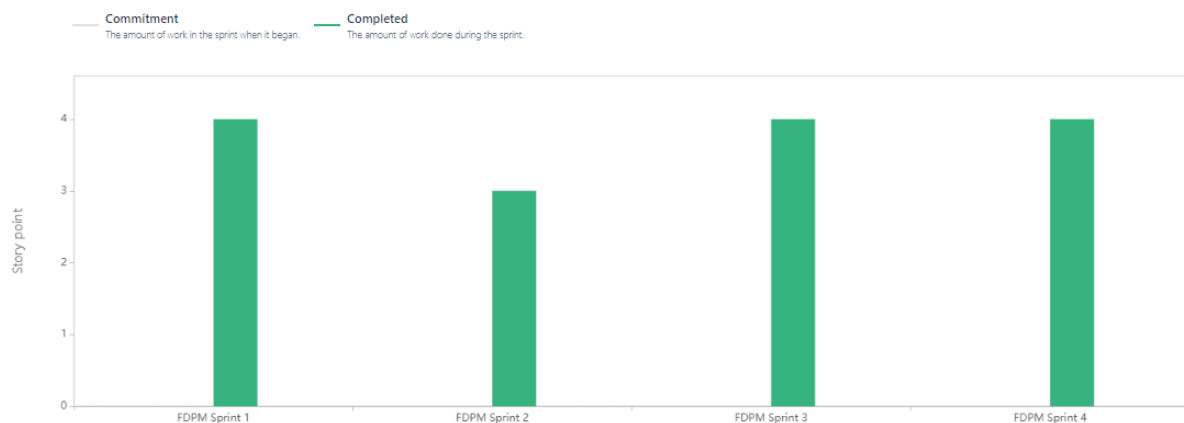
Sprint goal - The goal of this sprint is to integrate the model with the application



Burnup Report of Sprint 4

Velocity report

In the velocity report, the team's velocity is calculated by taking the average of the total completed estimates from their last few sprints. The velocity report of the team is shown below:

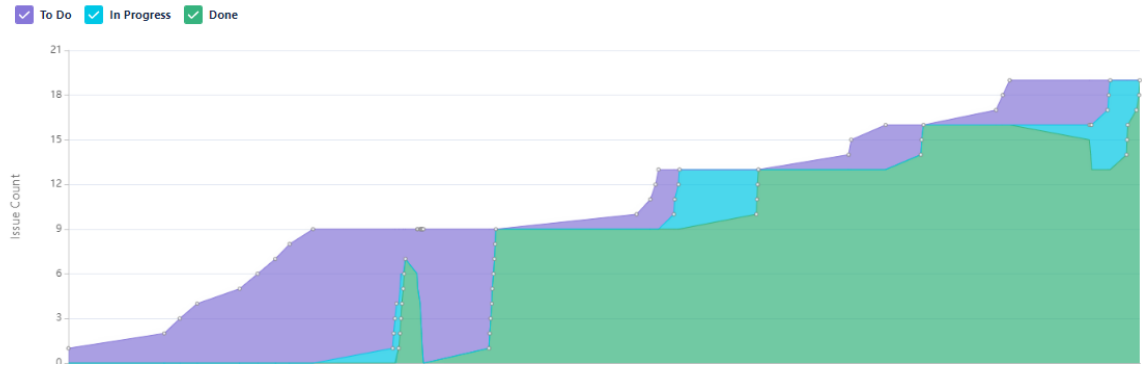


Sprint	Commitment	Completed
FDPM Sprint 1	0	4
FDPM Sprint 2	0	3
FDPM Sprint 3	0	4
FDPM Sprint 4	0	4

Velocity report

Cumulative flow diagram

Cumulative flow diagram shows the statuses of issues over time. This helps the team identify potential bottlenecks that need to be investigated. The cumulative flow diagram of the team is displayed below



Cumulative flow diagram