

## Project Planning Phase

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

Date	15 November 2023
Team ID	Team- 591954
Project Name	Weather Classification Using Deep Learning
Maximum Marks	20 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	USN-1	I want the option to contribute to localized weather. Collecting local weather data to train the model.	5	High	Sumanth
Sprint-2	Data preprocessing	USN-2	I want the ability to preprocess and clean the raw weather data to ensure consistency Using Image preprocessing Techniques	5	Medium	Dinesh
Sprint-3	Training Model	USN-3	I want the deep learning model is trained on the most recent and accurate weather. The model should support retraining using new labeled data.	10	High	Swamy & Dinesh
Sprint-4	Model Evaluation	USN-4	I want the system to be able to detect and predict extreme weather conditions. The Model should accurately detect extreme weather	5	High	Meghana
Sprint-5	Model Testing	USN-5	Conduct extensive testing and validation of the Deep learning model's predictions and the user interface's functionality to ensure accuracy and reliability.	5	medium	Sumanth & Meghana
Sprint-6	User Interface	USN-6	I want the weather app to provide user-friendly and understandable weather predictions for my destination. The application should allow me to input the destination weather Image.	10	medium	Dinesh & Swamy

### 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	5	3 Days	13 Nov 2023	15 Nov 2023	5	14 Nov 2023
Sprint-2	5	1 Day	15 Nov 2023	15 Nov 2023	5	14 Nov 2023
Sprint-3	10	2 Days	15 Nov 2023	16 Nov 2023	10	14 Nov 2023
Sprint-4	5	2 Days	16 Nov 2023	17 Nov 2023	5	14 Nov 2023
Sprint-5	5	3 Days	17 Nov 2023	19 Nov 2023	5	14 Nov 2023
Sprint-6	10	3 Days	19 Nov 2023	21 Nov 2023	10	14 Nov 2023

### Velocity:

Imagine we have a 9-day sprint duration, and the velocity of the team is 40 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

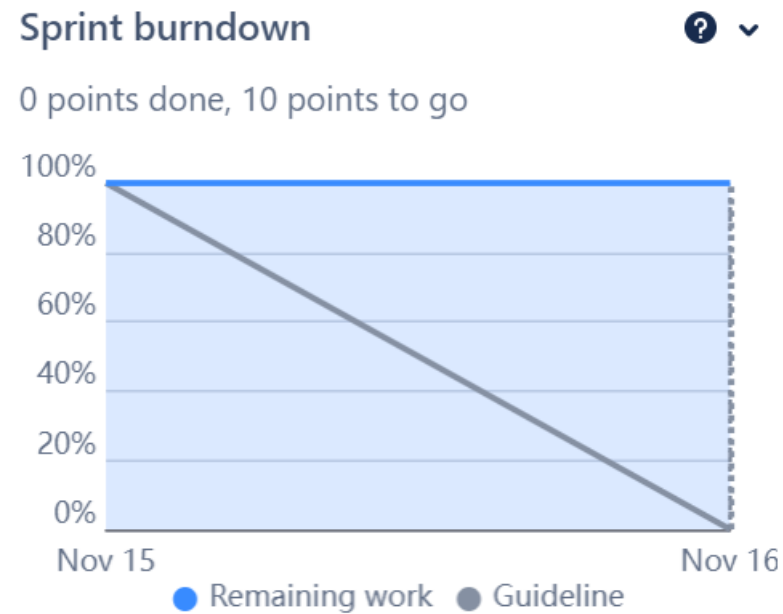
$$AV = \frac{\text{Sprint duration}}{\text{velocity}} = \frac{40}{9} = 4.4444$$

$$AV = 4.5$$

## Burndown Chart:

A burndown 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.

<https://www.visual-paradigm.com/scrum/scrum-burndown-chart/>  
<https://www.atlassian.com/agile/tutorials/burndown-charts>



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Complete sprint

TO DO 6

Accuracy and confidence score of the prediction

TESTING THE MODEL

WCUDL-27

3

User-friendly interface for data input and model output

USER INTERFACE

WCUDL-29

5

Fine-tuning of pre-trained model

IN PROGRESS 3

model accuracy and performance metrics

MODEL EVLUTION

WCUDL-23

3

DM

Selection of appropriate pre-trained model

TRAINING MODEL

WCUDL-19

5

DC

Identification of overfitting or underfitting issues

DONE ✓

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Backlog

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Sprint 315 Nov – 16 Nov (3 issues)

550Complete sprint

Selected best pretrained model

WCUDL-20 Fine-tuning of pre-trained model

TRAINING M...

TO DO

3

=

WCUDL-21 learning rate defining and adjusting model architecture

TRAINING M...

TO DO

2

=

WCUDL-19 Selection of appropriate pre-trained model

TRAINING M...

IN PROGRESS

5

=

DC

+ Create issue

Sprint 416 Nov – 17 Nov (2 issues)

050Complete sprint

Sprint 517 Nov – 19 Nov (2 issues)

500Complete sprint

Quickstart

## Timeline



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