

Project Planning Phase

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

Date	27 October 2023
Team ID	Team-592616
Project Name	Detecting Covid-19 from Chest X-Rays using Deep Learning Techniques
Maximum Marks	20 Marks

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

Use the template below to create a product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Project setup & Infrastructure	USN-1	Set up the development environment with the required tools and frameworks to start the Covid-19 Detection	1	High	Avinash
Sprint-1	Data Collection	USN-2	Gather a diverse dataset of images containing different types of Chest X-rays for training the deep-learning model	2	High	Ashwanth
Sprint-2	Data preprocessing	USN-3	Preprocess the collected dataset by resizing images, normalizing pixel values, and splitting it into training and validation sets.	2	High	Sreyas
Sprint-2	Model Development	USN-4	Explore and evaluate different deep learning architectures (e.g., CNNs) and transfer learning models to select the most suitable model for Covid Detection.	3	High	Avinash
Sprint-3	Model Training	USN-5	Train the selected deep learning model using the preprocessed dataset and monitor its performance on the validation set.	4	High	Divya
Sprint-2	Data Augmentation	USN-6	Implement data augmentation techniques (e.g., rotation, flipping) to improve the model's robustness and accuracy.	6	medium	Ashwanth
Sprint-4	Model deployment and integration	USN-7	Deploy the trained deep learning model as an API or web service to make it accessible for COVID-19 detection. integrate the model's API into a user-friendly web interface for users to upload images and receive COVID-19 detection results.	1	medium	Divya
Sprint-5	Testing & quality assurance	USN-8	Conduct thorough testing of the model and web interface to identify and report any issues or bugs. fine-tune the model hyperparameters and optimize its performance based on user feedback and testing results.	1	medium	Sreyas

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	3	2 Days	28 Oct 2023	30 Oct 2023		
Sprint-2	5	5 Days	31 Oct 2023	4 Nov 2023		
Sprint-3	10	2 Days	5 Nov 2023	6 Nov 2023		
Sprint-4	1	2 Day	7 Nov 2023	8 Nov 2023		
Sprint-5	1	1 Day	9 Nov 2023	9 Nov 2023		

Velocity:

Imagine we have a 29-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)

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

$$AV= 29/20 = 1.45$$

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>

Reference:

<https://www.atlassian.com/agile/project-management>
<https://www.atlassian.com/agile/tutorials/how-to-do-scrum-with-jira-software>
<https://www.atlassian.com/agile/tutorials/epics>
<https://www.atlassian.com/agile/tutorials/sprints>
<https://www.atlassian.com/agile/project-management/estimation>
<https://www.atlassian.com/agile/tutorials/burndown-charts>

Burndown Chart:

Sprint-1:

Sprint burndown

BETA ? ▾

3 points done, 6 points to go



Your sprint scope has increased by **9 points**



Added

0 points

↑ 8 issues

Removed

0 points

↓ 0 issues

Modified

+9 points

⚠ 6 issues

Sprint-2:

Sprint burndown

BETA ? ▾

0 points done, 9 points to go



Sprint-3:

Sprint burndown

BETA ? ▾

0 points done, 4 points to go

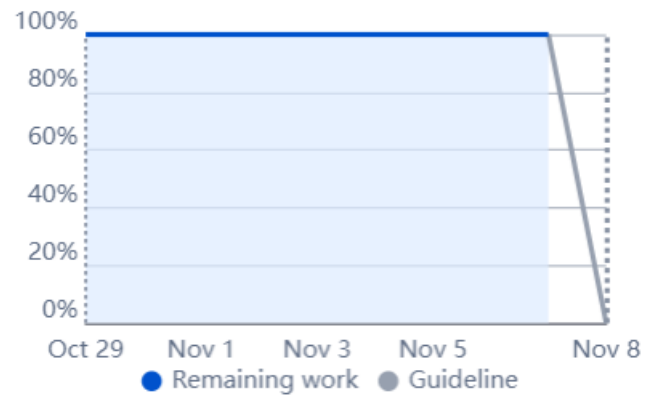


Sprint-4:

Sprint burndown

BETA ? v

0 points done, 1 point to go



Sprint-5:

Sprint burndown

BETA ? v

0 points done, 1 point to go



Board section:

We have completed sprint 1 and 2. So we can see the remaining tasks on board.

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Your work

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👤

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All sprints

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☆

Complete sprint

⋮

Q

👤👤👤

Epic

Sprint

GROUP BY

None

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TO DO 5

Explore and evaluate different deep learning architectures (e.g., CNNs) and transfer learning models to select the most suitable model for Covid Detection.
DATA PREPROCESSING, MODEL DEVELOP...
T5-14 3 👤

Train the selected deep learning model using the preprocessed dataset and monitor its performance on the validation set.
MODEL TRAINING
T5-16 4 👤

Implement data augmentation


IN PROGRESS 1

Gather a diverse dataset of images containing different types of Chest X-rays for training the deep-learning model
PROJECT SETUP, INFRASTRUCTURE & DAT...
T5-24 2 👤

DONE 2 ✓


Preprocess the collected dataset by resizing images, normalizing pixel values, and splitting it into training and validation sets.
DATA PREPROCESSING, MODEL DEVELOP...
T5-13 ✓ 2 👤


Set up the development environment with the required tools and frameworks to start the Covid-19 Detection
PROJECT SETUP, INFRASTRUCTURE & DAT...
T5-22 ✓ 1 👤

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All sprints

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Epic ▾

Sprint ▾

GROUP BY

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TO DO 5

To make it accessible for COVID-19 detection, integrate the model's API into a user-friendly web interface for users to upload images and receive COVID-19 detection results.

MODEL DEPLOYMENT & INTEGRATION

 T5-19 1 👤

Conduct thorough testing of the model and web interface to identify and report any issues or bugs, fine-tune the model hyperparameters and optimize its performance based on user feedback and testing results.

TESTING & QUALITY ASSURANCE

 T5-21 1 👤

IN PROGRESS 1

DONE 2 ✓



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Issues without epic

> Data preprocessing, Model Development & Data Augmentation

> Project setup, Infrastructure & Data Collection

> Model Training

> Model deployment & integration

> Testing & quality assurance

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T5 Sprint 1

28 Oct – 30 Oct

(2 issues)

021

Complete sprint

Create a strong setup for development and collect a diverse dataset of chest X-ray images to train the Covid-19 Detection model effectively.

T5-22

Set up the development environment with the required tools and framew...

PROJECT SET...

DONE

1

T5-24

Gather a diverse dataset of images containing different types of Chest X-...

PROJECT SET...

IN PROGRESS

2

+ Create issue

T5 Sprint 2

31 Oct – 4 Nov

(3 issues)

902

Complete sprint

Prepare the dataset, test various AI models for Covid detection, and apply techniques to boost accuracy.

T5-13

Preprocess the collected dataset by resizing images, normalizing pixel val...

DATA PREPRO...

DONE

2

T5-14

Explore and evaluate different deep learning architectures (e.g., CNNs) an...

DATA PREPRO...

TO DO

3

T5-17

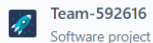
Implement data augmentation techniques (e.g., rotation, flipping) to imp...

DATA PREPRO...

TO DO

6

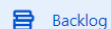
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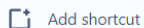
DEVELOPMENT



Code



Project pages



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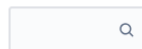
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> Data preprocessing, Model Development & Data Augmentation

> Project setup, Infrastructure & Data Collection

> Model Training

> Model deployment & integration

> Testing & quality assurance

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▼ T5 Sprint 3 5 Nov – 6 Nov (1 issue)

4 0 0

Complete sprint



Train the AI model with our prepared data and check how good it does on the validation data.

T5-16 Train the selected deep learning model using the preprocessed dataset and monitor...

MODEL TRAINING

TO DO

4

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▼ T5 Sprint 4 7 Nov – 8 Nov (1 issue)

1 0 0

Complete sprint



Make the trained model available for COVID-19 detection by turning it into an API and linking it to a user-friendly web tool, enabling users to upload images and get COVID-19 results.

T5-19 Deploy the trained deep learning model as an API or web service to make it accessib...

MODEL DEPLOYMENT ...

TO DO

1

[+ Create issue](#)

▼ T5 Sprint 5 9 Nov – 9 Nov (1 issue)

1 0 0

Complete sprint



Rigorously test the model and web interface, find and report any problems or bugs. Improve the model's settings and enhance its performance using user feedback and test results.

T5-21 Conduct thorough testing of the model and web interface to identify and report any...


TESTING & QUALITY AS...

TO DO

1

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
Timeline:





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
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Sprints				
> T5-12 Data preprocessing, Model Devel...				
> T5-1 Project setup, Infrastructure & Dat...				
> T5-15 Model Training				
> T5-18 Model deployment & integration				
> T5-20 Testing & quality assurance				
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