

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

Date	26-10-2023
Team ID	Team-592641
Project Name	Image Caption Generation
Marks	4

Product Backlog, Sprint Schedule, and Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Project setup & Development environment	USN-1	Set up the dev environment with all necessary tools to begin the project.	1	High	Gokul
Sprint-2	Data collection	USN-2	Collect a diverse dataset of images to train the deep learning model.	2	High	Yaswanth
Sprint-2	Data preprocessing - I	USN-3	Preprocess the collected dataset by resizing images, normalizing pixel values, and splitting it into training and validation sets.	1	High	Pranav
Sprint-2	Data preprocessing - II	USN-4	Implement data augmentation techniques (e.g., rotation, flipping) to improve the model's robustness and accuracy.	1	Medium	Pranav
Sprint-3	Model development	USN-5	Examine and assess various deep learning structures in order to determine the most appropriate model for generating image captions.	4	High	Shreyas
Sprint-3	Training	USN-6	Train the chosen model using the preprocessed dataset and monitor its performance on a validation set. Ensure the model can generate descriptive captions for images.	6	High	Gokul
Sprint-4	Model deployment & Integration	USN-7	Deploy the trained image caption generation model as an API or web service to allow users to submit images and receive generated captions. Integrate the model's API into a user-friendly web interface.	4	Medium	Yaswanth
Sprint-5	Testing & quality assurance	USN-8	Conduct thorough testing of the model and web interface to identify and report any issues or inaccuracies in caption generation. Gather user feedback for model optimization.	1	Medium	Shreyas

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	1	1 Days	28 October 2023	28 October 2023		
Sprint-2	4	2 Days	29 October 2023	30 October 2023		
Sprint-3	10	4 Days	31 October 2023	3 November 2023		
Sprint-4	4	2 Days	4 November 2023	5 November 2023		
Sprint-5	1	1 Days	6 November 2023	6 November 2023		

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)

$$V1(\text{Sprint 1}) = 1 / 1 = 1$$

$$V2(\text{Sprint 2}) = 2 / 4 = 0.50$$

$$V3(\text{Sprint 3}) = 4 / 10 = 0.40$$

$$V4(\text{Sprint 4}) = 2 / 4 = 0.50$$

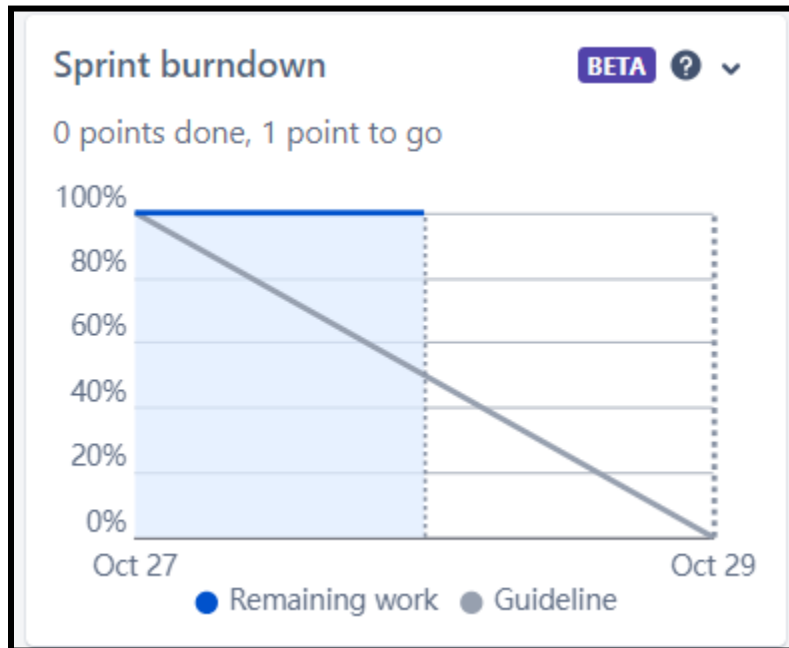
$$V5(\text{Sprint 5}) = 1 / 1 = 1$$

Total Sprint Duration= 10 days

Total Velocity = 20 points

$$\text{Average Velocity (AV)} = \text{Sprint Duration} / \text{Velocity} = (1+2+4+2+1)/(1+4+10+4+1) = 0.50$$

Burndown Chart:



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PP Sprint 1 28 Oct – 29 Oct (1 issue) 0 1 0 Start sprint

PP-1 Set up the dev environment with all necessary tools to begin the project. PROJECT SETUP & DEV... IN PROGRESS 1

+ Create issue

PP Sprint 2 29 Oct – 30 Oct (3 issues) 4 0 0 Start sprint

PP-2 Collect a diverse dataset of images to train the deep learning model. DATA COLLECTION AN... TO DO 2

PP-6 Preprocess the collected dataset by resizing images, normalizing pixel values, and splitting it into training and validation sets. DATA COLLECTION AN... TO DO 1

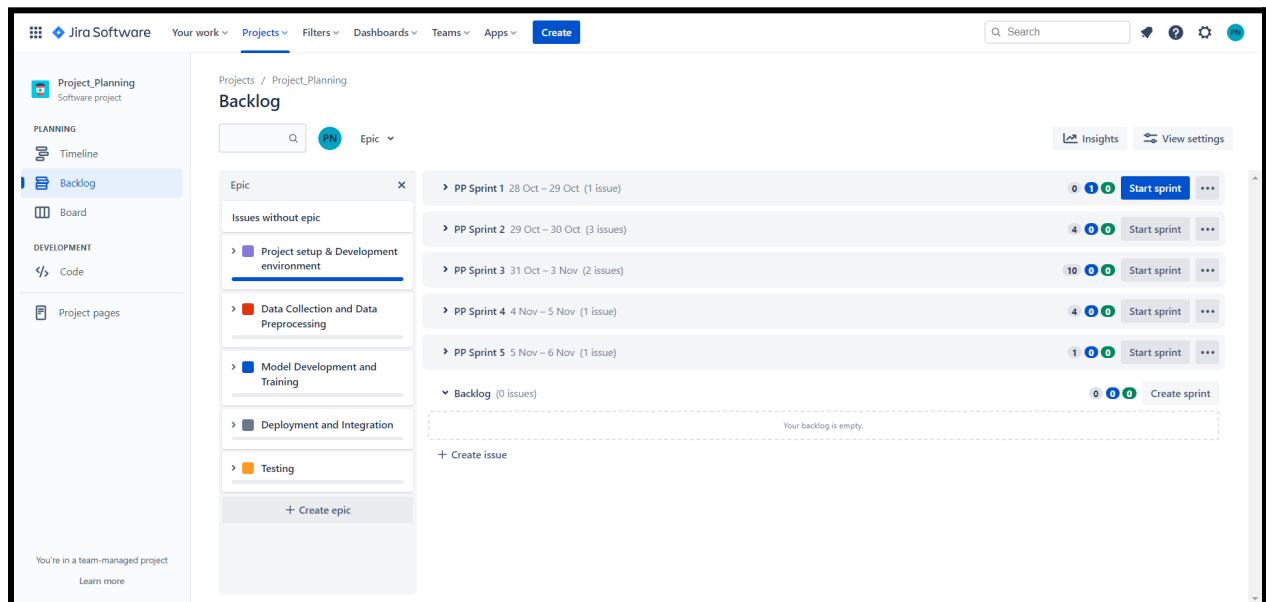
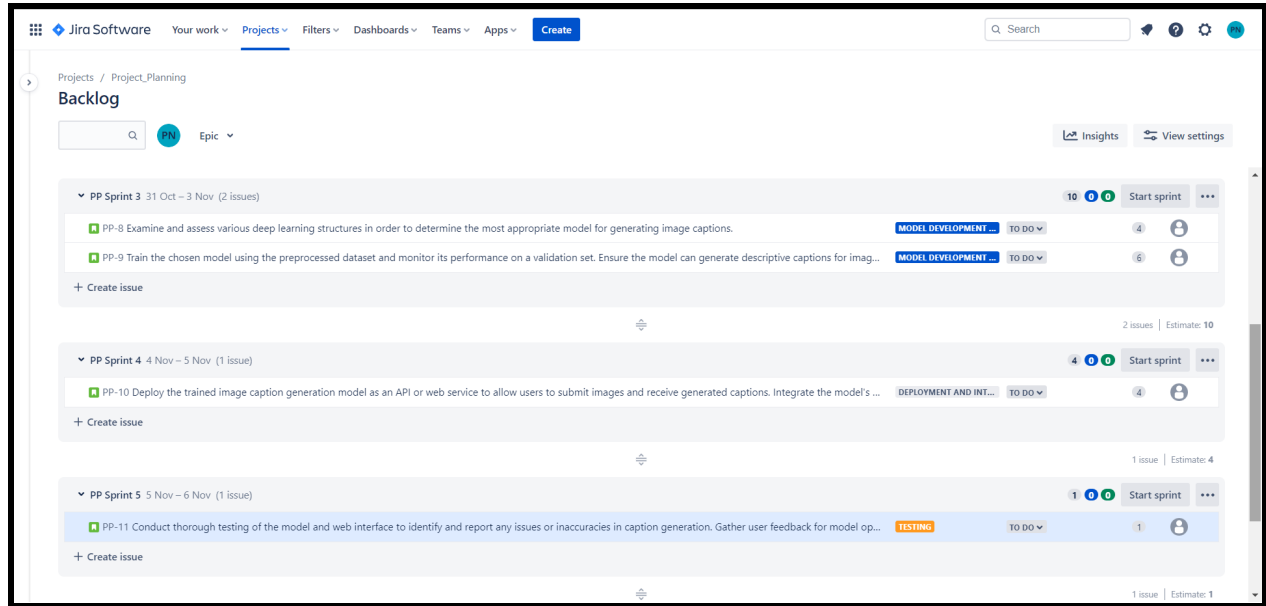
PP-7 Implement data augmentation techniques (e.g., rotation, flipping) to improve the model's robustness and accuracy. DATA COLLECTION AN... TO DO 1

+ Create issue

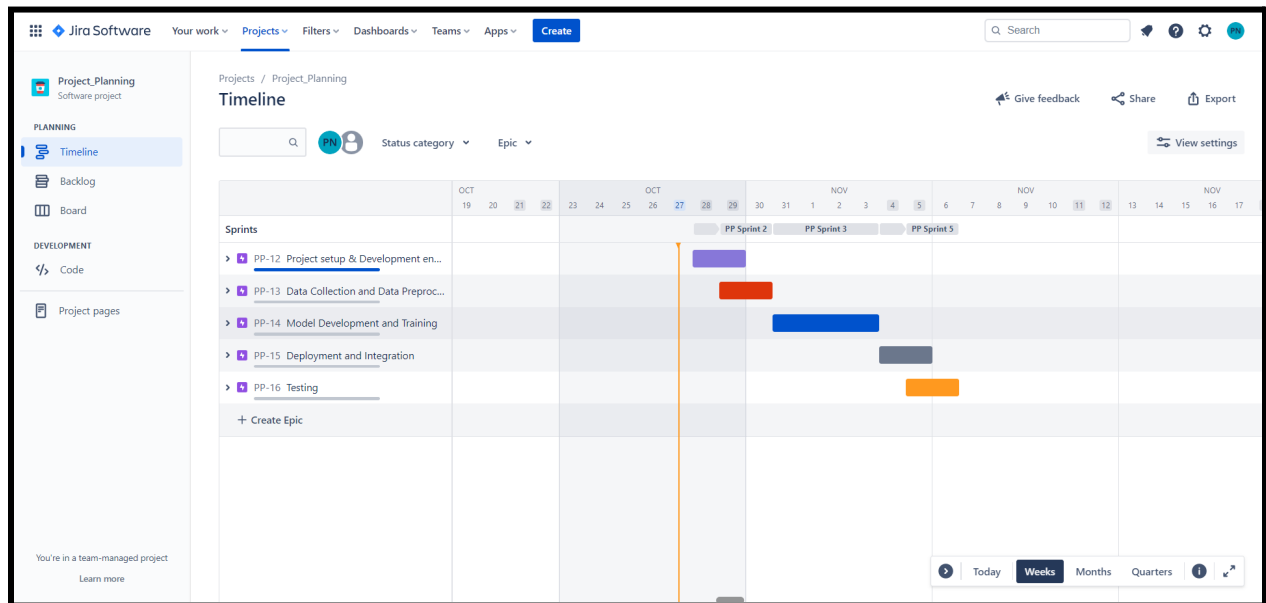
PP Sprint 3 31 Oct – 3 Nov (2 issues) 10 0 0 Start sprint

PP-8 Examine and assess various deep learning structures in order to determine the most appropriate model for generating image captions. MODEL DEVELOPMENT... TO DO 4

PP-9 Train the chosen model using the preprocessed dataset and monitor its performance on a validation set. Ensure the model can generate descriptive captions for imag... MODEL DEVELOPMENT... TO DO 6



Timeline:



Board:

