Project Planning Phase

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

Date	18 October 2022
Team ID	PNT2022TMIDxxxxxx
Project Name	Malware detection and classification
Maximum Marks	8 Marks

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

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint 1	Registration	USN-1	As a user, I can create an account by providing my email, setting a password, and confirming it. After registration, I can access my dashboard.	2	High	Chaitanya, Rohit
Sprint 1	Registration	USN-2	As a user, I should receive a confirmation email upon successful registration. I can receive the email and click the confirmation link to activate my account.	1	High	Akshay, Kunawar
Sprint 1	Login	USN-3	As a user, I can log into my account by entering my email and password. I can access my dashboard after a successful login.	2	High	Chaitanya, Rohit
Sprint 1	Registration	USN-5	As a web user, I can register for the application through the web interface. I can create an account by providing my email, setting a password, and confirming it.	1	High	Akshay, Kunawar
Sprint 1	Login	USN-6	As a web user, I can log into the application using the web interface. I can access my dashboard after a successful login.	2	High	Chaitanya, Rohit
Sprint 2	Dashboard	USN-4	As a user, I can view real-time scan progress and receive notifications at the end of the scan. I receive notifications and can monitor the scan's progress in real time.	1	Medium	Akshay, Kunawar
Sprint 2	Registration	USN-7	As a user, I can register for the application through Twitter.	2	Low	Chaitanya, Rohit
Sprint 3	Login	USN-8	As a user, I can log into the application through a fingerprint scanner.	1	Medium	Akshay, Kunawar

Sprint 4	Dashboard	USN-9	As a customer care executive, I can access the dashboard to monitor the status of malware detection for users. I can view the real-time progress of malware detection for all users.	2	High	Chaitanya, Rohit
Sprint 5	User Management	USN-10	As an administrator, I can manage user accounts, including creation, modification, and deactivation. I can create, update, and deactivate user accounts.	1	High	Akshay, Kunawar
Sprint 6	Data Usage Limits	USN-11	As an administrator, I can set data usage limits and analysis options for the system. I can configure data usage limits and analysis options.	2	Medium	Chaitanya, Rohit

Project Tracker, Velocity & Burndown Chart: (4 Marks)

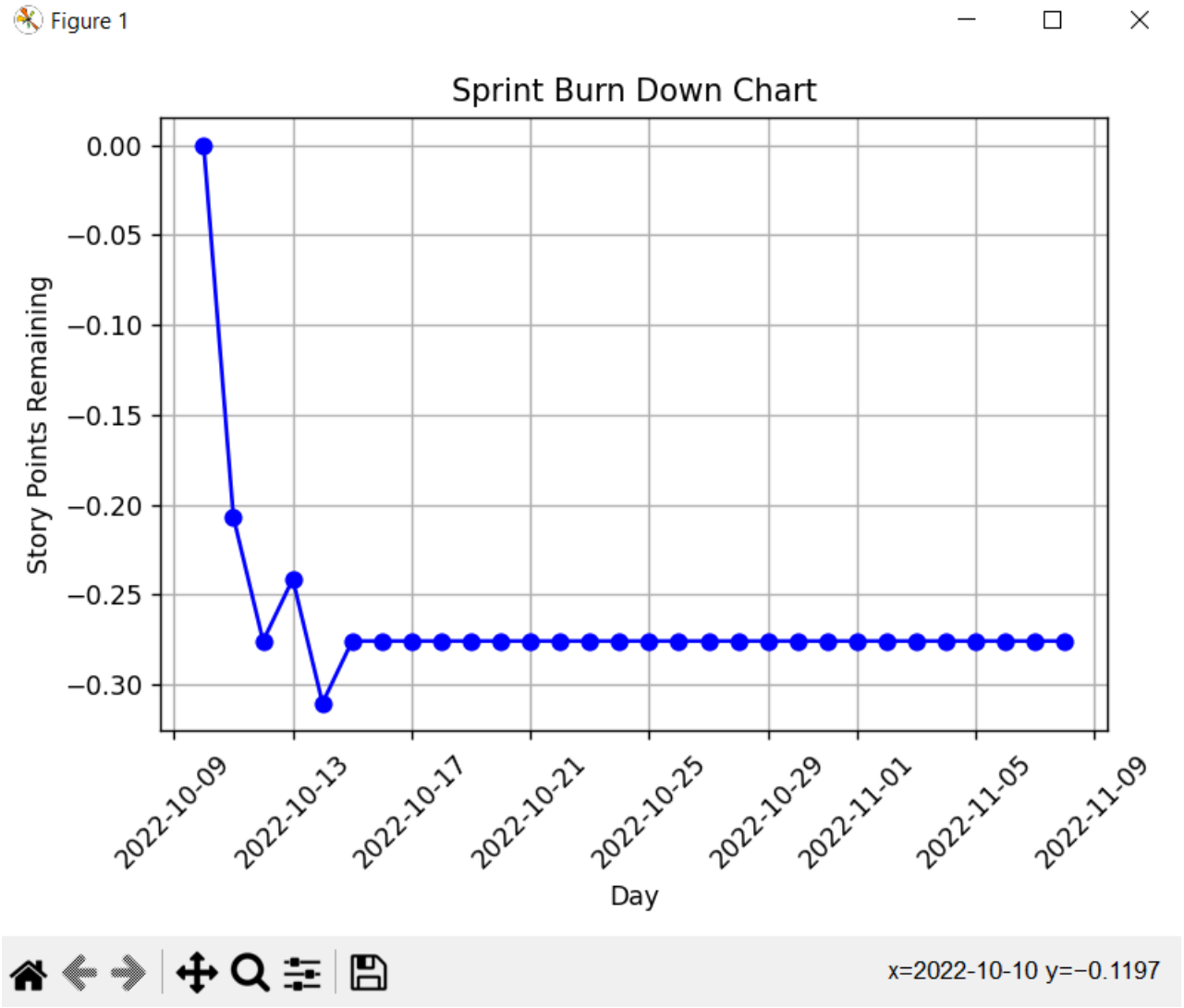
Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Sprint Release Date (Actual)
Sprint 1	10	7 Days	October 4, 2022	October 10, 2022	October 11, 2022
Sprint 2	4	6 Days	October 12, 2022	October 17, 2022	October 18, 2022
Sprint 3	2	5 Days	October 19, 2022	October 24, 2022	October 25, 2022
Sprint 4	3	6 Days	October 26, 2022	October 31, 2022	November 1, 2022
Sprint 5	1	3 Days	November 2, 2022	November 4, 2022	November 5, 2022
Sprint 6	2	3 Days	November 6, 2022	November 8, 2022	November 9, 2022

Velocity:

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

AV=30/15=2
AV=sprint duration/velocity =(7+6+5+6+3+3)/(10+4+3+2+1+2)
=30/15
=2

Burndown Chart:



The project planning phase is a critical component of our endeavor to develop a robust malware detection and classification system using Machine

Learning (ML) techniques. This phase lays the foundation for the entire project and ensures that we proceed systematically towards achieving our

goals. Below, we outline the key aspects of the project planning phase:

1. Objective Definition:

- Clearly define the project's objectives, which in this case, are to develop a malware detection and classification system. Specify the desired

outcomes and success criteria.

2. Scope Definition:

- Determine the scope of the project, which includes the types of malware to be detected and classified and the platforms or environments it will

cover (e.g., Windows, Android).

3. Resource Allocation:

- Identify the necessary resources such as hardware, software, datasets, and personnel. Allocate a budget and establish a timeline for the project.

4. Data Collection and Preprocessing:

- Plan for data acquisition, considering factors like data sources, labeling, and data preprocessing. Collecting a diverse and representative dataset is

vital for model training.

5. Model Selection:

- Decide on the ML algorithms and models to be used for malware detection and classification. Assess their suitability for the project's scope and

objectives.

6. Feature Engineering:

- Develop strategies for extracting relevant features from the collected data. This is essential for enhancing the model's accuracy.

7. Model Training and Validation:

- Define the methodology for training the models and how they will be validated and fine-tuned. Consider techniques like cross-validation and

hyperparameter tuning.

8. Evaluation Metrics:

- Determine the evaluation metrics that will be used to assess the model's performance, such as accuracy, precision, recall, and F1-score.

9. Integration and Deployment:

- Plan for the integration of the trained model into the final system and deployment in a real-world environment, if applicable.

10. Testing and Quality Assurance:

- Define a rigorous testing process to identify and rectify any issues or bugs. Quality assurance is vital to ensure the system's reliability.

11. Documentation and Reporting:

- Establish guidelines for documenting the project's progress and results, which will be crucial for creating a comprehensive final report.

12. Risk Assessment:

- Identify potential risks, such as data leakage or model vulnerabilities, and develop strategies to mitigate them.

13. Project Timeline:

- Create a detailed timeline with milestones and deadlines to track the project's progress and ensure it stays on schedule.

The project planning phase serves as a roadmap, guiding us through the development of a malware detection and classification system using ML. It provides clarity, structure, and a systematic approach to ensure the successful execution of the project while adhering to the defined objectives and constraints