# Hematovision – Project Logic

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| Date | 26 June 2025 |
| Team ID | LTVIP2025TMID39268 |
| Project Name | Hematovision – Advanced Blood Cell  Classification using Transfer Learning |
| Maximum Marks | 4 Marks |

**Agile Terms**

* Sprint: A fixed period (5 days) during which the team works to complete specific tasks.
* Epic: A large segment of the project, usually too big for a single sprint, divided into smaller Stories.
* Story: A small, actionable task within an Epic.
* Story Point: A measure of effort required to complete a Story, often following the Fibonacci sequence (1, 2, 3, 5, etc.).

**Sprint Planning**

**Sprint 1 (5 Days) – 8 Story Points**

Epic: Data Collection and Preprocessing

|  |  |
| --- | --- |
| **Story** | **Story Points** |
| **Search & download dataset (blood smear images)** | 2 |
| **Load dataset into notebook** | 1 |
| **Check for missing data & handle missing values** | 2 |
| **Encode categorical labels (cell types)** | 2 |
| **Explore data (visualizations, class distribution)** | 1 |

Total Story Points – Sprint 1: 8

**Sprint 2 (5 Days) – 16 Story Points**

Epic: Model Development & Deployment

|  |  |
| --- | --- |
| **Story** | **Story Points** |
| **Choose pretrained models for transfer learning** | 2 |
| **Build transfer learning pipeline** | 3 |
| **Train model on dataset** | 3 |
| **Evaluate model accuracy, confusion matrix** | 2 |
| **Prepare plots for results (accuracy curves, etc.)** | 1 |
| **Build HTML UI for predictions** | 2 |
| **Create Flask app backend** | 2 |
| **Integrate model into Flask app** | 1 |

Total Story Points – Sprint 2: 16

**Velocity Calculation**

* Total Story Points = 8 + 16 = 24
* Number of Sprints = 2
* Velocity = Total Story Points / Number of Sprints = 24 / 2 = 12 Story Points per Sprint

Hence, our team’s velocity is 12 Story Points per Sprint.

# Project Planning Template – Hematovision

Project Planning Phase

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

Date: [26 June 2025]

Team ID: [LTVIP2025TMID45471]

Project Name: Hematovision – Advanced Blood Cell Classification using Transfer Learning

Maximum Marks: 5 Marks

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sprint** | **Functio nal**  **Require ment (Epic)** | **User**  **Story**  **Number** | **User**  **Story /**  **Task** | **Story Points** | **Priority** | **Team Membe**  **rs** |
| **Sprint-1** | Data Collectio n | USN-1 | Search and downloa d blood cell  image datasets | 2 | High | Yaga Lakshmi |
| **Sprint-1** | Data Collectio n | USN-2 | Load dataset into  noteboo k and check format | 1 | High | Yaga Lakshmi |
| **Sprint-1** | Data Preproce ssing | USN-3 | Handle missing values in dataset | 2 | Medium | Thumma  la Kavya |
| **Sprint-1** | Data Preproce ssing | USN-4 | Encode categori cal labels for cell types | 2 | Medium | Thumma  la Kavya |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sprint-1** | Data Explorat ion | USN-5 | Visualize class distribut ion and sample images | 1 | Medium | Yaga Lakshmi |
| **Sprint-2** | Model Building | USN-6 | Choose pretrain ed models  for transfer learning | 2 | High | Vidavalu ru Glory Manvith a |
| **Sprint-2** | Model Building | USN-7 | Build transfer learning pipeline | 3 | High | Vidavalu ru Glory Manvith a |
| **Sprint-2** | Model Training | USN-8 | Train model on blood  cell  dataset | 3 | High | Vidavalu ru Glory Manvith a |
| **Sprint-2** | Evaluati on | USN-9 | Evaluate model accuracy and confusio n matrix | 2 | High | Vidavalu ru Glory Manvith a |
| **Sprint-2** | Results | USN-10 | Plot learning curves and accuracy charts | 1 | Medium | Vidavalu ru Glory manvith a |
| **Sprint-2** | Deploym ent | USN-11 | Build  HTML  page for predictio ns | 2 | High | Saragad am Bhuvane shwari |
| **Sprint-2** | Deploym ent | USN-12 | Create Flask app backend  for predictio ns | 2 | High | Saragad am Bhuvane shwari |
| **Sprint-2** | Deploym ent | USN-13 | Integrat e trained model | 1 | High | Saragad am Bhuvane |
|  |  |  | into Flask app |  |  | shwari |

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sprint** | **Total**  **Story**  **Points** | **Duratio n** | **Sprint**  **Start**  **Date** | **Sprint**  **End**  **Date (Planne d)** | **Story**  **Points Comple**  **ted (as on Planned**  **End**  **Date)** | **Sprint**  **Release**  **Date**  **(Actual)** |
| **Sprint-1** | 8 | 5 Days | 18 June  2025 | 23 June  2025 | 8 | 22 June  2025 |
| **Sprint-2** | 16 | 5 Days | 23 June  2025 | 27 June  2025 | 16 | 28 June  2025 |

**Velocity Calculation:**

* Total Story Points = 24
* Number of Sprints = 2
* Velocity = Total Story Points / Number of Sprints = 12 Story Points per Sprint

Hence, our team’s velocity is 12 Story Points per Sprint.

**Burndown Chart:**

See burndown chart below for Hematovision project progress:

**References:**

* https://www.atlassian.com/agile/tutorials/epics
* https://www.atlassian.com/agile/tutorials/burndown-charts

