

## Project Design Phase-II

### Data Flow Diagram & User Stories

|               |                                                                          |
|---------------|--------------------------------------------------------------------------|
| Date          | 27 January 2026                                                          |
| Team ID       | LTVIP2026TMIDS55747                                                      |
| Project Name  | Hematovision: Advanced Blood Cell Classification Using Transfer Learning |
| Maximum Marks | 4 Marks                                                                  |

#### Data Flow Description

Instead of the "Order Processing" examples in your screenshots, describe the **HematoVision** flow:

1. **Input:** User (Technician) uploads microscopic blood smear images to the Flask Web UI.
2. **Transformation:** The system preprocesses images (resizing to 224x224 and normalization).
3. **Process:** The **MobileNetV2** Deep Learning algorithm analyzes features to classify cell subtypes.
4. **Output:** The system returns the classification result and a confidence score to the Dashboard for the User.

#### User Stories Table

Replace the "Registration" and "Facebook Login" examples with the specific tasks from your **Planning Logic**.

| User Type      | Functional Requirement (Epic) | User Story Number | User Story / Task                                              | Acceptance Criteria                | Priority |
|----------------|-------------------------------|-------------------|----------------------------------------------------------------|------------------------------------|----------|
| Lab Technician | Data Preparation              | USN-5             | As a user, I want the system to automatically resize my images | Images are standardized to 224x224 | High     |

|                    |                           |        |                                                                                                           |                                                          |        |
|--------------------|---------------------------|--------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------|
|                    |                           |        | for consistent analysis.                                                                                  | \times 224\$ pixels.                                     |        |
| <b>Pathologist</b> | <b>AI Classification</b>  | USN-10 | As a user, I want to upload a cell image and see its specific subtype immediately.                        | System displays predicted class with a confidence score. | High   |
| <b>Researcher</b>  | <b>Data Visualization</b> | USN-6  | As a user, I want to see a bar chart of the dataset distribution to understand the model's training base. | A dynamic bar chart is visible on the dashboard.         | Medium |