**Project Design Phase**

**Proposed Solution**

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| Date | 26 June 2025 |
| Team ID | LTVIP2025TMID46251 |
| Project Name | **HematoVision: Advanced Blood Cell Classification Using Transfer Learning** |
| Maximum Marks | 2 Marks |

Project team shall fill the following information in the proposed solution template.

| **S.No.** | **Parameter** | **Description** |
| --- | --- | --- |
| **1** | **Problem Statement** | **Manual blood cell classification is time-consuming, error-prone, and inaccessible in remote areas, leading to diagnostic delays and reduced treatment efficiency.** |
| **2** | **Idea / Solution Description** | **HematoVision uses transfer learning with MobileNetV2 to classify blood cells (eosinophils, lymphocytes, monocytes, neutrophils) via a Flask-based web interface.** |
| **3** | **Novelty / Uniqueness** | **Combines transfer learning and web deployment for real-time diagnosis; usable for education, remote healthcare, and clinical automation.** |
| **4** | **Social Impact / Customer Satisfaction** | **Enables faster, accessible, and accurate diagnosis; reduces burden on pathologists; supports medical learning and improves rural healthcare access.** |
| **5** | **Business Model (Revenue Model)** | **Freemium-based SaaS model for clinics; subscription for medical colleges; enterprise version for hospitals with premium analytics and support.** |
| **6** | **Scalability of the Solution** | **The model can be scaled with more cell types or diseases, integrated into diagnostic systems, and deployed across cloud platforms for global access.** |