**Project Design Phase**

**Proposed Solution Template**

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| Date | 26/06/2025 |
| Team ID | LTVIP2025TMID33042 |
| Project Name | HematoVision-Blood Cell Classifier |
| Maximum Marks | 2 Marks |

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| | S.No. | Parameter | Description | | --- | --- | --- | | 1 | Problem Statement | Lab technicians in resource-limited labs face slow, error-prone blood cell classification using manual microscopy—delaying diagnosis and affecting treatment quality. | | 2 | Idea / Solution Description | HematoVision is an offline AI-powered desktop tool that classifies blood cells from microscope images, displays top-3 predictions with confidence scores and heatmaps, and exports A4-style PDF reports. | | 3 | Novelty / Uniqueness | Entirely offline, HematoVision combines image preprocessing, model inference, and reporting in a single lightweight Flask app—no internet or cloud dependencies. | | 4 | Social Impact / Customer Satisfaction | Saves technician time, reduces diagnostic variability, and democratizes access to AI tools—particularly valuable in underserved regions. | | 5 | Business Model (Revenue Model) | Freemium open-source base with optional paid upgrades (e.g., multi-user dashboards, EMR integration); institutional licensing for training colleges and hospitals. | | 6 | Scalability of the Solution | Modular codebase enables easy updates and model swaps. Can be extended to other diagnostic microscopy tasks or bundled into rural health kits. | |