**Project Design Phase**

**Problem – Solution Fit Template**

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

**Purpose: •** Validate that our offline AI tool truly solves the core pain-points of blood-cell classification in resource-limited labs.

• Identify existing behaviours and channels to accelerate adoption.

• Align metrics and messaging to customer needs.

| Problem | Existing Alternatives | Solution Concept | Key Metrics |
| --- | --- | --- | --- |
| Lab technicians spend 5–10 minutes per slide on manual microscopy, with high inter-observer variability and frequent delays. | • Manual light-microscope classification  • Centralized lab analyzers (costly, scarce)  • Online AI services (requires network) | An offline Flask-based desktop app (HematoVision) using a compact, transfer-learned CNN to deliver top-3 cell-type predictions with confidence scores, heatmap explanations, and one-click PDF reports. | • ≤ 5 s inference time  • ≥ 90 % top-1 accuracy  • PDF export ≤ 2 s  • ≥ 80 % user satisfaction |

**> References:** > 1. Problem–Solution Fit Canvas (IdeaHackers) >

2. HematoVision user research (Sections 2 & 3)