Problem-Solution fit canvas 2.0

Purpose / Vision: Empowering healthcare with AI-driven blood cell classification for faster, accurate, and accessible diagnostics.

Define CS, fit into

1. CUSTOMER SEGMENT(S) — CS

Our primary customers are medical professionals, diagnostic labs, and pathology centers who require quick and accurate blood cell classification. Additionally, medical researchers and educational institutions can benefit from automated analysis to assist in training, diagnosis, and research purposes.

6. CUSTOMER — CC

Customers such as diagnostic labs or small clinics may face **budget limitations**, restricting access to expensive diagnostic tools. **Limited computing resources** and **lack of stable internet connectivity** in rural or remote areas can also hinder the use of cloud-based or high-compute solutions. Additionally, **shortage of trained technicians** or inconsistent manual interpretations can impact diagnostic accuracy.

5. AVAILABLE SOLUTIONS — AS

- **Manual Microscopic Examination** – Performed by trained pathologists or lab technicians using traditional microscopes. It's accurate but **time-consuming and labor-intensive**.
- **Automated Hematology Analyzers** – Expensive lab equipment used in advanced hospitals. They offer speed and consistency but are often **unaffordable and inaccessible** in smaller clinics or rural settings.
- **Outsourcing to Diagnostic Labs** – Patients' samples are sent to centralized labs. While accurate, it leads to **delays in results** and increased costs.
- **Basic Mobile Health Apps** – Few experimental or prototype apps exist, but **lack accuracy and regulatory approval**.

Explore AS,

Focus on J&P, tap into BE, understand

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

- **Automating Blood Cell Classification:** Eliminates manual errors and saves time by automating the identification of eosinophils, lymphocytes, monocytes, and neutrophils.
- **Supporting Medical Diagnosis:** Assists healthcare professionals in making quicker, more accurate decisions in diagnosing infections or blood disorders.
- **Enabling Access in Resource-Limited Settings:** Provides a low-cost diagnostic aid that can run on standard hardware, reducing reliance on high-end lab equipment.
- **Standardizing Interpretation:** Reduces variation in results caused by differing levels of human expertise, especially in rural or overloaded clinics.

9. PROBLEM ROOT CAUSE — RC

The root cause of the problem is the **time-consuming and error-prone nature of manual blood cell classification**, which requires skilled hematologists and advanced laboratory setups. In many regions, especially **rural or resource-limited areas**, there is a **shortage of trained professionals**, and the **demand for faster diagnostics** has increased due to rising patient loads and emerging diseases. This has created an urgent need for **automated, reliable, and scalable diagnostic solutions** that reduce human dependency and accelerate medical decision-making.

7. BEHAVIOUR — BE

Customers manually examine blood cells under a microscope, refer to senior experts, or use online resources and training materials to classify cell types. Some engage in additional learning or advocacy to improve diagnostic accuracy and access to better tools.

Focus on J&P, tap into BE, understand

Identify strong TR & EM

3. TRIGGERS — TR

Customers are triggered to act when they face diagnostic delays, see successful use of AI tools in labs, read research on automated cell analysis, or observe peers adopting efficient digital diagnostic systems.

4. EMOTIONS: BEFORE / AFTER — EM

Before using the solution, customers often feel uncertain, anxious, or overwhelmed by manual diagnosis and time delays. After adopting the tool, they feel more confident, assured, and in control with faster, accurate, and automated results.

10. YOUR SOLUTION — SL

- ☑ Solves the identified problems
- ☑ Fits within the customer's limitations (cost, access, skill)
- ☑ Aligns with their behavior and motivations

8. CHANNELS of BEHAVIOUR — CH

8.1 Search for automated blood cell classification tools on Google or medical forums
8.2 Download academic papers or case studies on AI-based hematology solutions
8.3 Watch YouTube demos of blood analysis or diagnostic tools
8.4 Use medical software platforms or mobile apps for diagnostic assistance
8.5 Join forums or groups (like Reddit, LinkedIn, or ResearchGate) to discuss medical AI

8.2 OFFLINE
Manually examine blood smears using microscopes in pathology labs
Consult senior doctors or pathologists for second opinions
Attend medical conferences or workshops to learn about new diagnostic tools
Contact diagnostic equipment vendors for demos or pricing
Review institutional procurement options for lab upgrades

Extract online & offline CH of BE

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