

Ideation Phase

Define the Problem Statements

Date	20 January 2026
Team ID	LTVIP2026TMIDS76912
Project Name	HematoVision: Advanced Blood Cell Classification Using Transfer Learning
Maximum Marks	4 Marks

Customer Problem Statement

Pathologists and laboratory technicians face heavy workloads, time constraints, and the risk of human error in manual blood cell analysis. Accurate classification requires expertise and is difficult to scale, especially in rural or resource-limited settings. Healthcare providers need a reliable, fast, and consistent solution that reduces manual effort while maintaining high diagnostic accuracy.

HematoVision addresses this need by delivering an AI-powered blood cell classification system that enables efficient, accurate, and scalable diagnostic support.

Problem Statement 1:-

I am	a pathologist who needs to analyze the blood smear samples of many patients daily to provide accurate diagnoses.
I'm trying to	classify blood cells quickly and accurately to ensure patients receive prompt and correct treatment.
but	manual microscopy is slow, labor-intensive, and prone to human errors, making it difficult to keep up with the workload.
because	current diagnostic methods require meticulous visual inspection, and we lack advanced AI tools to assist in blood cell classification.
which makes me feel	overworked, stressed about potential misdiagnosis, and under pressure to deliver results quickly and accurately.

Problem Statement 2:-

I am	a pathologist or laboratory technician responsible for analyzing blood smear samples accurately and efficiently in a clinical setting.
I'm trying to	classify blood cells quickly and correctly to support accurate diagnosis and timely patient treatment.
but	manual microscopy analysis is time-consuming, prone to human error, and highly dependent on individual expertise and workload.
because	traditional diagnostic processes rely heavily on visual inspection without automated assistance, and there is limited access to advanced AI-based tools in many healthcare settings.
which makes me feel	pressured, concerned about potential misdiagnosis, and overwhelmed by increasing diagnostic workload.

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	a pathologist or laboratory technician responsible for analyzing blood smear samples accurately and efficiently in a clinical setting.	Classify blood cells quickly and accurately for diagnosis.	Manual microscopy is slow, error-prone, and depends on expertise.	Traditional diagnostics rely on manual inspection with limited AI support.	pressured, concerned about potential misdiagnosis, and overwhelmed by increasing diagnostic workload.
PS-2	a pathologist or laboratory technician responsible for analyzing blood smear samples accurately and efficiently in a clinical setting.	Classify blood cells quickly and accurately to support timely and reliable diagnosis.	Manual microscopy is time-consuming, error-prone, and heavily dependent on individual expertise.	Traditional diagnostic methods rely mainly on visual inspection without sufficient automated AI support.	Pressured, concerned about possible misdiagnosis, and overwhelmed by increasing workload.