Ideation Phase
Define the Problem Statements

Date	20-02-2026
Team ID	LTVIP2026TMIDS24575
Project Name	Hemato Vision
Maximum Marks	2 Marks

Customer Problem Statement:

In medical laboratories, blood test is one of the most commonly performed tests for diagnosing many diseases such as anemia, infections, leukemia and other blood disorders. For this test, lab technicians observe blood smear slides under a microscope and manually count Red Blood Cells (RBC), White Blood Cells (WBC) and Platelets.

This manual process takes a lot of time and requires high concentration. The technician must carefully examine each slide, which can lead to eye strain and tiredness. Because of continuous observation, there is also a chance of human error. Even a small mistake in counting or identifying abnormal cells may affect the diagnosis and treatment of the patient.

Sometimes laboratories receive many samples in a single day, which causes delay in report generation. Patients have to wait longer to receive their medical reports. In rural and small hospitals, lack of advanced equipment and skilled professionals makes the problem even more difficult.

Therefore, there is a need for an automated system that can analyze microscopic blood images quickly and accurately. An Artificial Intelligence based solution can help detect and classify blood cells, reduce manual work, minimize human errors and generate faster reports.

The proposed project **HematoVision** aims to develop an AI-based blood cell detection system that can automatically identify different types of blood cells from microscopic images and assist laboratory staff in diagnosis.