

## Model Development Phase Template

Date	05 July 2025
Team ID	SWTID1749835721
Project Title	Hematovision: Advanced Blood Cell Classification Using Transfer Learning
Maximum Marks	5 Marks

## Feature Selection Report Template

In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

Feature	Description	Selected (Yes/No)	Reasoning
Image_ID	Unique identifier for each blood smear image	No	Not needed for classification; used only for record keeping.
Image_Data	Pixel data of the blood smear images	Yes	Core input for classification using transfer learning models.
Cell_Type	Label of the blood cell type (e.g., RBC, WBC, Platelet, etc.)	Yes	Target variable for classification; essential for training and evaluation.
Patient_Age	Age of the patient	Yes	Can help identify age-specific blood disorders or anomalies.

Patient_Gender	Gender of the patient	Yes	Certain blood disorders have gender predispositions (e.g., hemophilia).
Stain_Type	Type of staining method used on the slide	Yes	Different stains can affect the appearance of cells in images.
Magnification_Level	Magnification level of the microscope during image capture	Yes	Variations in magnification can impact image features for classification.
Image_Quality_Score	Score representing image clarity and resolution	Yes	Used for pre-processing to exclude poor-quality images that may hinder accuracy.
Annotation_Source	Source of image labeling (pathologist/manual /AI-generated)	Yes	Important to assess reliability and potential bias in training data.
Diagnosis_Status	Diagnostic outcome based on classification	Yes	Required to validate the effectiveness of the model in a clinical context.