

Model Development Phase Template

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.

Step	Details
Objective	Identify the most relevant features that contribute significantly to predicting anemia in individuals.
Initial Features Considered	<ul style="list-style-type: none">- Gender- Hemoglobin- MCH (Mean Corpuscular Hemoglobin)- MCHC (Mean Corpuscular Hemoglobin Concentration)- MCV (Mean Corpuscular Volume)
Target Variable	Result (0: Not Anemic, 1: Anemic)
Method Used	Correlation Analysis, Domain Knowledge, Feature Importance using ML Models
Correlation Insights	<ul style="list-style-type: none">- Hemoglobin showed the highest negative correlation with the target (lower levels indicate anemia).- MCH, MCHC, and MCV exhibited moderate positive correlation.- Gender showed a slight correlation but was retained for medical relevance.
Feature Importance (Random Forest)	<ol style="list-style-type: none">1. Hemoglobin2. MCH3. MCV4. MCHC5. Gender
Final Features Selected	All original features were retained due to their meaningful contribution and clinical significance.
Reason for Selection	All five features are relevant in diagnosing anemia, supported by both statistical and medical evidence.