

# Alpha Thalassemia Classifier Parameters Descriptions

Achhuta Nand Jha

## Column Descriptions

- sex:** Gender of the individual (e.g., "female" or "male").
- hb:** Hemoglobin level (measured in g/dL) - Indicates the concentration of hemoglobin in the blood, which is important for oxygen transport.
- pcv:** Packed Cell Volume (hematocrit, measured as a percentage) - Represents the proportion of blood volume occupied by red blood cells.
- rbc:** Red Blood Cell count (measured in millions/ $\mu$ L) - The number of red blood cells present in a given volume of blood.
- mcv:** Mean Corpuscular Volume (measured in femtoliters, fL) - The average size of individual red blood cells.
- mch:** Mean Corpuscular Hemoglobin (measured in picograms, pg) - The average amount of hemoglobin per red blood cell.
- mchc:** Mean Corpuscular Hemoglobin Concentration (measured in g/dL) - The concentration of hemoglobin in a given volume of packed red blood cells.
- rdw:** Red Cell Distribution Width (measured as a percentage) - A measure of the variation in the size of red blood cells.
- wbc:** White Blood Cell count (measured in thousands/ $\mu$ L) - The number of white blood cells present in a given volume of blood, important for immune response.
- neut:** Neutrophil percentage - The proportion of neutrophils (a type of white blood cell) among total white blood cells.
- lymph:** Lymphocyte percentage - The proportion of lymphocytes (another type of white blood cell) among total white blood cells.
- plt:** Platelet count (measured in thousands/ $\mu$ L) - The number of platelets in the blood, which are essential for blood clotting.
- hba:** Hemoglobin A percentage - The proportion of normal adult hemoglobin.
- hba2:** Hemoglobin A2 percentage - A variant of adult hemoglobin.
- hbf:** Hemoglobin F percentage - The proportion of fetal hemoglobin.

**phenotype:** Clinical or genetic classification of the individual (e.g., "alpha carrier") - Indicates the person's genetic or observed traits, likely related to a condition such as alpha-thalassemia.