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Unveiling The Shadows: A Guide For Diagnosing Leukemia And Better Outcome

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Abstract: *Diagnosis of leukemia is performed through blood tests and a bone marrow diagnostic assay, with blood cell counts playing a critical role in the healthcare industry. Traditionally, hospital laboratories manually count blood cells using a hemocytometer. This approach is tedious, prone to errors, and time-consuming. The research introduces a fully automated method for identifying various types of leukemia and detecting nursing platelets in blood samples. This proposed technique employs a multi-class classifier to overcome the limitations and missed opportunities often encountered with traditional cell classification methods. This technique employs geographical metrics to identify various color feature statistics within the context of supervised machine learning. The model, trained and validated using several machine learning approaches, achieves an accuracy of 92%.*

Keywords: Advanced Machine Learning, Predictive Model, White Blood Cells (WBC), Red Bloods Cells (RBC)