308. DETECTION OF ACUTE MYELOGENOUS LEUKEMIA IN BLOOD MICROSCOPIC IMAGES

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Acute myelogenous leukemia (AML) is a subtype of acute leukemia in which the white blood cell (WBC) count increases with immature blast cells (myeloids or lymphoid). AML is a cancer of the blood and the bone marrow which leads to fatal infection, bleeding and organ infiltration .The need for better methods for leukemia detection arises since the current method involves manual examination of the blood smear.This is time consuming and its accuracy depends on the lab technician's ability. In this paper a simplified technique that automatically segments and detects AML in blood microscopic images is presented .The technique includes segmentation by k-means clustering , feature extraction using local directional pattern (LDP) and finally classification using support vector machine (SVM). The performance parameters considered for evaluation are accuracy,specificity and sensitivity. MATLAB is the simulation software chosen for this project.

Index Terms-Acute Myelogenous Leukemia (AML), Local Directional Pattern (LDP),
Support Vector Machine (SVM), Segmentation, Feature Extraction, Classification.

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