A Journey Through Methodological Advancements: Blood Cell Abnormality Detection from Traditional Counts to Advanced Deep Learning Strategies

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Abstract

Automated hematological abnormalities' detection in a cost-effective and time-efficient manner have become an emerging research trend in recent years due to its' real-life significance. Early detection of these abnormalities facilitates timely intervention ultimately saving lives leading to a substantial deduction in mortality rate. While this research area holds significant relevance, there exists a scarcity of developed methods in this particular domain, underscoring the need for further advancement. To address this gap, our objective is to conduct a comprehensive survey examining the evolutionary trajectory of methods in this research domain. We aim to trace the progression from traditional counting-based approaches to the more contemporary deep neural technologies developed in recent times. This survey is primarily undertaken with the overarching goal of offering researchers profound insights into the chosen research topic. By delving into the methodologies developed within this domain, our aim is to facilitate a thorough analysis of research gaps. This, in turn, will help channelize future research endeavors in the correct direction, ensuring a more targeted and impactful approach.

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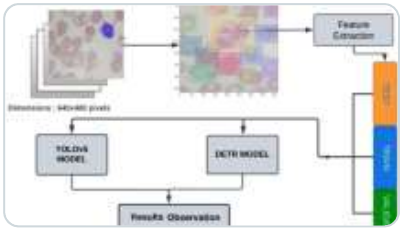

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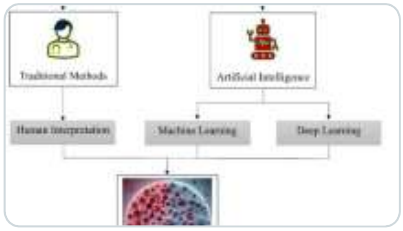

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