Blood Cell Image Classification

Problem Statement: What can we learn from a blood test once we apply machine learning to help identify white blood cell types?

Context: White blood cells are an important part of the body's immune system response. There are different types of white blood cells and each has a specific function. Being able to send off a sample and have the summary of results automated would save time. Correctly identifying types of white blood cells is the first step in that process.

Criteria for Success: The model is successful when we have maximized the number of correctly identified white blood cell types.

Scope of Solution Space: This is specifically identifying the type of white blood cells by image, and then returning counts of each type.

Constraints: The only constraint is the integrity of the data.

Stakeholders: Anyone who could benefit from identifying white blood cell types by image.

Data Sources: <u>Blood Cell Images</u> data set from <u>kaggle.com</u>.

Deliverables: The contents of this project will be contained in a Github Repo that includes a PDF of the problem statement, all code written including notebooks and scripts, a slide presentation and a project report.