**Motivation for the project**

The project consists of researching and developing new approaches on how to assess blood samples for malaria, this was always one of the things that I was very interested in as it combines machine learning and biology in its own rights. With malaria being a serious infectious disease, which has plagued humanity for a very long time, I believe developing new classification and detection methods can have the potential to turn the tide in the fight against malaria and the contribution to this cause is invaluable for the cause itself and for my own experience.

This project will also help me develop and understanding of this particular academic field which I think will prove invaluable in the future, and as this topic is deep within the scope of scientific academic research it will help me get a good understanding of the methodology on how these scientific methods are being carried out and how the academic papers themselves are written.

Furthermore, this project has potential to provide a new perspective into the field of malaria in terms of the approach on how to classify red blood cells and how to detect the malaria infected red blood cells with a reasonable amount of confidence. This project can also introduce non-industry standard techniques into how the problem is being tackled in the first place, such as using genetic programming to create the classifier and developing my own CNN with different attributes than the industry standard recommends which would ultimately push the research forward.

In conclusion I believe that this project is well suited for my goals and interests and that it will be possible for me to create a good classifier and detection architecture aiding the fight against malaria.

**Project management approach**

One of the most crucial approaches is to be able to sufficiently document all research and all progress onto Jira with sufficient evidence being provided on Gitlab. With regular updates to Jira the progress of the development process can be tracked effectively and therefore the Waterfall management approach would be the most fitting. This is due to the fact that the project goal is clearly defined, and the development should be sequential.

**Plan for remainder of project**

Project Objectives:

* Develop a detection and classifier system
* Optimize classifier and detection to a sufficient and efficient standard
* Formulate project findings and compare to peer-reviewed research
* Deliver a high-quality deliverable and the end of the project with good documentation
* Be able to run the classification and detection algorithms on a smartphone

The implementation plan for this project is as follows; firstly, the main goal for the project is to develop sufficient detection and classifier methods which would allow me to understand the different methodologies used for the development, this would in turn lead to trying out different approaches until the most optimal and accurate method can be achieved. Secondly, the goal of the project is to be able to formulate these findings effectively and do enough academic research to understand that the approach used is beneficial to the problem as a whole. Thirdly, if possible, the project could be ported onto an application which can be used on your smartphone to take pictures of malaria samples through a commonly accessible light microscope in places of need.

The risks for the projects are summarized in the risk assessment form however the most influential risks are to be able to finish the project on time to a sufficient standard and to be able to continuously improve its quality until, again, a sufficient standard is reached.