Scrum Details:

shows the list of tasks completed so far and the time spent on each one. It also includes the priority level for each task. During the first sprint since we did not have many tasks to complete, the group was not divided in any particular way, and we shortly after decided on dividing the task of writing up a literature review corresponding to the two parts, we were completing research on at the time. After a consensus decision, Aref and Evans completed the first literature review while Sameh and Baraa took charge of the deep learning literature review that followed. However, for the research part itself, all 4 members worked on the Research for both Image processing techniques as well as Deep learning basics.

During the second sprint, the tasks became more defined and we were able to distribute them more efficiently. As shown in the sprint backlog, each individual was responsible for a certain task from that point forwards, with the exception of the project report and deep learning research which was done as a group effort. We met for the research part once a week, but for the higher priority tasks we met twice a week to ensure all members were kept informed and up to date. At the end of this sprint, we now have our images segmented and ready to feed to the deep learning model.

Review:

Once we had completed the first sprint, which lasted for 6-7 weeks, we gathered strong knowledge regarding the very foundation and fundamentals of the image processing and deep learning basics we were planning to use in the second sprint further on, which is reflected in the first phase of the product backlog figure. This research-intensive work we completed revolved mostly around finding specific research papers which included many image segmentation processes as well as information on neural networks in general which were found through online means as well as being provided by our supervisor.

The first sprint helped us transition easily to the next sprint which although had its fair share of research as well, this sprint was more focused on the application of the knowledge we have gathered up to this point. This helped us in completing the segmentation of the iris from the eye images and preparing the images in the correct format needed for the deep learning model we want to use. The research portion of the sprint could have been completed and managed better as it halted us from completing the division of the data test and training sets. We will keep in mind to complete research more efficiently for the upcoming future in order to match our sprint guideline.

Retrospective:

At the beginning of the project, it was difficult to look at the shape of the sprint, although it looked like we were on track, there were very few and limited tasks to complete as well as the fact that most of the tasks revolved around individual research by each group member rather than strongly defined tasks which made the sprint chart obsolete. This caused us to encounter our first problem which was communication; although we met with our supervisor, the weekly meetings left many topics and questions regarding the project itself unanswered and unclear as we did not have a strong basis to work upon. This also resulted in miscommunication regarding a major aspect of the project as a whole: whether we were doing an application or research-based project.

However, during the second sprint which occurred after the 7th week of the project development process, we learned to become more collaborative and work better together as a team. The first step was to make ourselves more experienced with the Trello Board and learn to use it in a correct manner. This immediately had a positive impact on the shape of the group, as we started to become more expressive in our opinions. On the other hand, we did not have to change everything, for example, our method of communication from start to present is done through Google Meets as we found it to be the easiest, fastest and most clear way of staying in touch within the group and with the supervisor as well. We also kept in touch with our supervisor more often through Messenger which was initially only used to set up and approve meeting dates and timings, however, on week 7 and onwards we started to share more ideas and ask more questions through the Messenger medium as well where we were able to receive almost immediate answers.

In summary;

What went well so far:

* Thorough research was made during the research-oriented weeks.
* Gathered many related works due to strong research.
* Were able to clearly grasp the end goal by the end of the project deadline.

What went wrong:

* Misunderstanding about the nature of the project (Research-based).
* Work done at the start and towards the end of the sprint more often, instead of being spread throughout the duration (caused fatigue).
* Some tasks took longer than expected, mostly due to the 2nd sprint being much shorter (sprint 1 was 7 weeks, sprint 2 was only 4 weeks)

What was improved:

* Improved expressiveness during meetings and chats.
* Better use of communication software such as Trello, Messenger.
* Incorporate supervisor more strongly in development process.

What can still be improved:

* Manage time more efficiently in order to complete more demanding tasks on time whilst still doing research on the side.
* Look even further ahead in order to plan better and more accordingly.