Project report

Team: Group 8
Project name: The Owl Project

1   Team members

In table 1, the team members, their main tasks and hours spend are listed. When multiple people worked on the same task, an indication was added after the task.

Name	Student number	Task	Hours spend
Marit Bentvelzen	F110617 & 5574420	- Developing the experimental setup (⅔) - Developing the questionnaire - Writing the final paper	65
Koen Schellens	6608345	- Research possible setups to measure accuracy (⅙) - Processing the screen videos from the experiment (½) - Presenting the final presentation	45
Priyanka Singhvi	6481892	- Research possible setups to measure accuracy (2/6) - Building the webpage for the experiment (⅕)	45
Leonardo Vida	6557929	- Present the project pitch - Conducting the experiment (½) - Processing the screen videos from the experiment (½) - Statistics	55
Esmée van Vilsteren	6224369	- Developing the experimental setup. (⅓) - Writing the project plan - Present the intermediate presentation - Developing the Google form, apart from the questionnaire - Testing the webpage for the experiment - Conducting the experiment (½) - Writing the final report	60
Joris van der Zee	6632939	- Research possible setups to measure accuracy (3/6) - Building the webpage for the experiment (⅘)	60

Table 1. The team members

1.1   Special external issues

Luckily, we did not experience any special external issues.

2   Background information

2.1   Materials, content, tools etc. from external sources

The following materials, content and tools are used from external sources:
- **Hawkeye Access:** This app allowed us to use eye-tracking on an iPhone X or newer.
- The experimental setup is based on **literature**, see the references in the final paper.
- In the first part of the test (in the webpage), some tasks are taken from everyday apps such as Facebook, navigation page and messenger.

2.2   Materials, content, tools created by the project group

The following materials, content and tools are created by the project group:
- The webpage that measured the quantitative variables in the experiment, including most of the images (exceptions see 2.1).
- The Google form, including a consent form, preliminary questionnaire, explanation of the experiment, questionnaire to gather all the qualitative variables.

By the creation of the webpage, we had a lot of difficulties with getting the exact location of a 'click'. We made a workaround by making one full-screen button with a picture of a target and circles around the target. Each circle was 0,67 cm bigger than the previous circle, see picture 1. By making a screen recording of the test, we could see in which circle the participant 'clicked' and calculate the distance from the target. For example, the participant 'clicked' in the third circle from the target giving him a distance of 2,01 = 3 * 0,67

Figure 1. The back-up plan to get the location of the click

2.3   Special internal issues

The major internal issue we had, was getting the exact location of a 'click'. The entire team brainstormed together to fix this problem, we set a deadline and worked out a back-up plan (see 2.2). Unfortunately, we could not get the location automatically before our deadline, so we used our back-up plan. This changed our experimental setup from having one test in which all the quantitative variables are measured to two: a test for speed with real-life examples (the original test) and a test for the accuracy and the precision (the back-up plan).
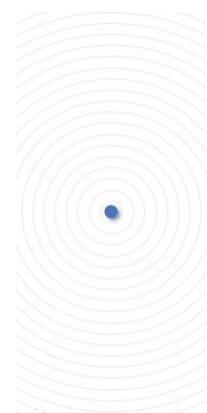
In the beginning, we had the idea to make the eye-tracking software ourselves using AR-kit. However, we quickly noticed that it would take us a lot of time and it probably would not give the same results as the Hawkeye app. Besides that, the Hawkeye app, allowed us to change the input type (gazing and blinking).