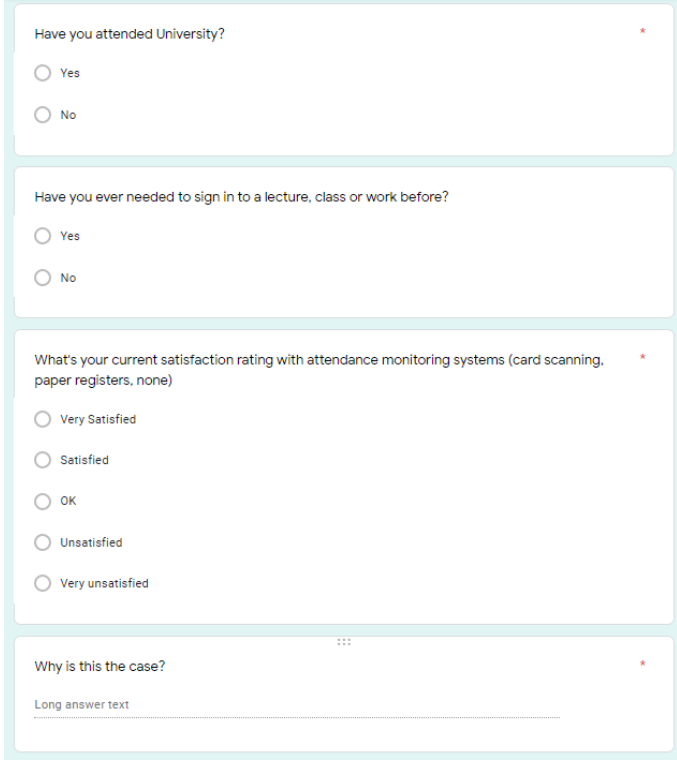# Testing Analysis

Introduction

Understanding our in-house evaluation in important for self-reflection as well as improving the overall system for future releases. However, as F.R.A.M.E has been built to be used by a wide audience, exceeding those in our team, we need to understand differing opinions on whether this product can be a viable alternative to existing systems in place currently.

The approach we took was to create a software evaluation user survey. Our target audience would be broad, ranging from students, staff and people who haven't attended University. We decided to cast a wide net, rather than small focus groups to ensure our product meets the demands of a diverse audience. Included in the following analysis document, is a list of our survey questions, as well as an un-biased dataset that was chosen at random to show what user's thought of F.R.A.M.E.

User Survey Questions

Our first section of the User Survey discussed several personal questions that were related to our project. We decided to include these questions to gain a better insight into our audience and to see if they had existing problems with attendance monitoring systems.

[Figure 1.1 Personal Information Questions]

F.R.A.M.E – Facial Recognition Attendance Monitoring Engine

The following section of our User Survey covered the experience with F.R.A.M.E. We needed to ensure that our project was easily navigable and straight forward to use, so there wouldn't be any technical knowledge required to use the system. We also added any personal thoughts relating to the project and allowed users to identify any areas that required more work or new features.
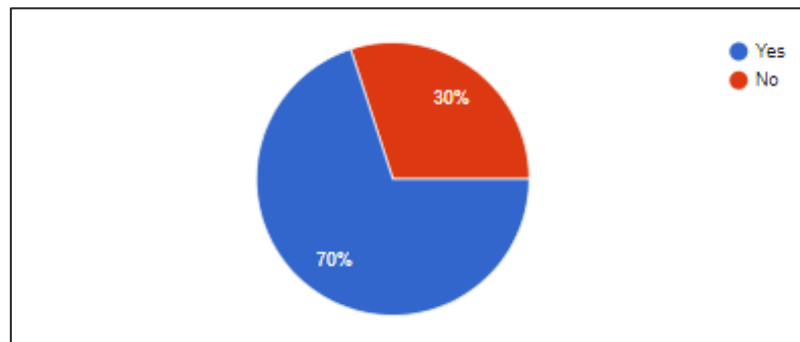

[Figure 1.2 System Survey Questions]

Results

These are the following User Survey results that were aggregated from our questionnaire above. We will also be evaluating the results to conclude whether our testing analysis was successful. The results were taken by a range of students, staff and those who haven't attended University.

Have you attended University?

[Figure 2.1]

We chose to distribute the survey to a range of users. This included those who attended the University of Kent, other universities and those who are in full time industry positions. The reason behind this is that we needed to gain feedback about our system not only by students but also industry experts. This data reveals that our system could be integrated into different areas of attendance monitoring.

Have you ever needed to sign into a lecture, class or work before?
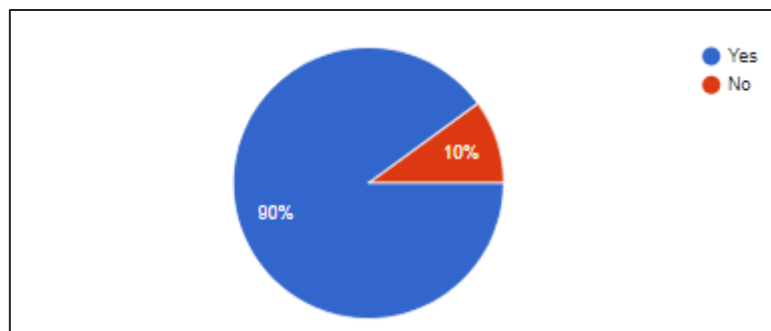
[Figure 2.2]

Our system targets those that require an attendance system whether that be for lectures, classes or work. Therefore, our main audience was targeted towards this. However, we made sure to include users that haven't needed to sign in before to see is the system would be useful to them.

What's your current satisfaction rating with attendance monitoring systems (card scanning, paper registers, none)?
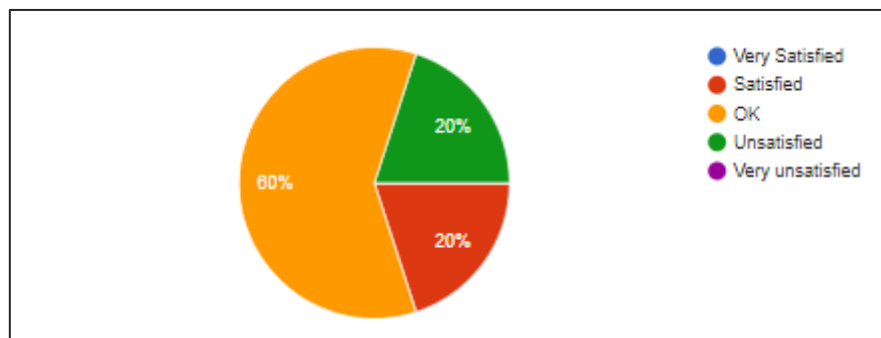

[Figure 2.3]

Our survey revealed that the majority of our test subjects were neutral about their current attendance monitoring systems. This shows that there is room for improvement and a system like F.R.A.M.E would be beneficial to the system.

Why is this the case?

[Figure 2.4]

Our users submitted their responses to why they chose the satisfaction rating they did. From the data we can see that there is room for improvement in the current systems available. Paper registers were the main concern as to why very satisfied. Many users said that they're

not accurate, students can sign in other classmates and that they've gone missing in the past. Other reasons included that the registers are a slow process and can be distracting during a class, when paying attention to the lecturer.

Would you like a system such as F.R.A.M.E to be implemented at your institution/work?
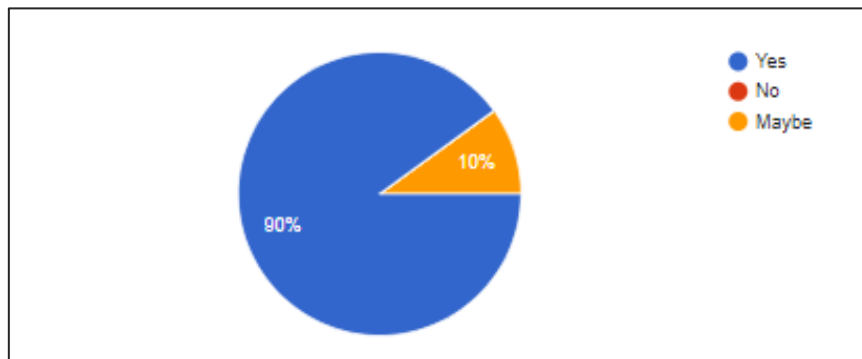
[Figure 2.5]

90% of our survey revealed that they liked our system and believed that it would be an appropriate system to be implemented into their workplace or educational institution.

Explain why you chose your answer

would make the whole situation a lot more efficient and help lecturers massively

An electronic system would be much easier and help gather the data quicker.

It is quick and efficient

More reliable source of attendance records.

Not just for monitoring of working hours but for reasons such as Health & Safety issues
Also for security reasons shoud be used when issuing identity documents and, most often be combined with other biometric technologies such as fingerprints (prevention of ID fraud and identity theft).

It seems very sophisticated and easy to use.

May disturb the class if in progress

It's a lot more efficient and reliable. There is no way to cheat is as the lecturer can see the faces of those who attended. It's faster, and does not distract you from the lecture. It also provides the lecturers with helpful analytics in an automated way.

It is a very efficient and useful way of finding data and certain info needed for our courses

Facial recognition will prove attendance rather than someone else signing in another

[Figure 2.6]

The answers our users gave were that the system is easy to use and that it's quick and efficient. The system is quick at signing in students and dealing with the data, freeing up the lecturer's time to allow them to focus on the class in progress. Another user explained that the system stops cheating in classes, as the lecturer can see the student's photo manually, if there are any doubts. The analysis gathered by the system can also be helpful for staff.

Do you feel that F.R.A.M.E is easy to navigate and understand, from a student and staff perspective?
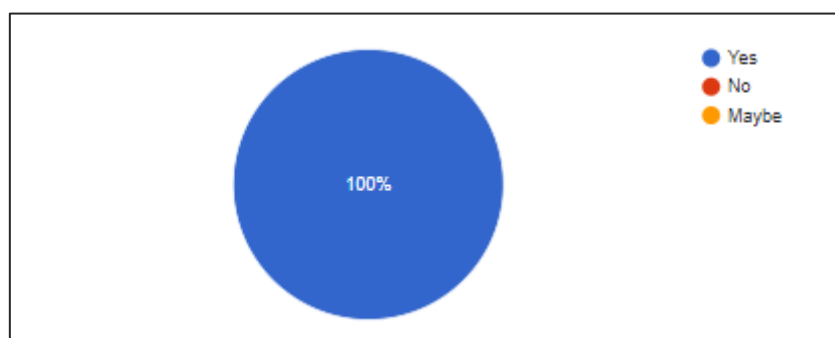
[Figure 2.7]

One hundred percent of our users were content with the way the system is designed. They agreed that the system is easy to navigate from both student and staff perspectives. This data reveals that only minor UI changes should be made to the system, these changes should be tested on an audience first to see if they still clearly understand the system. This data also revealed that the project video was easy to understand and covered the full system in enough detail.

If so, why do you feel Schools would benefit/not benefit from the use of F.R.A.M.E?

[Figure 2.8]

6
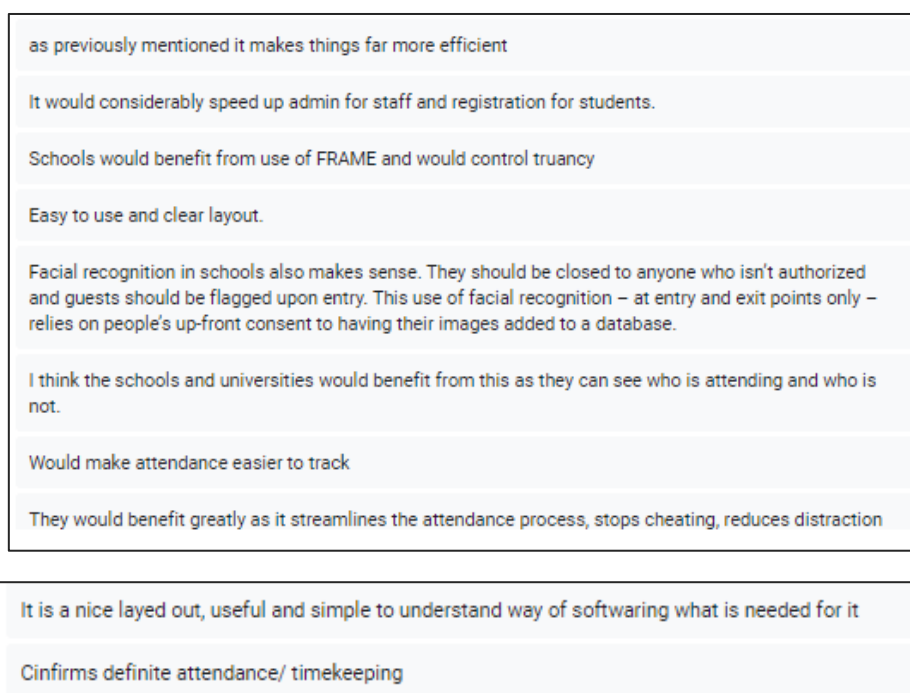
The responses the users gave to why a school would or wouldn't benefit from the system were varied with an overwhelmingly positive response. Many users discussed that it allows attendance monitoring to be tracked easier, it would streamline the entire process of attendance. This result shows us that the system would be a universal system across the University, allowing for a consistent monitoring process. The facial recognition portion of the system also helps control truancy and makes the process of taking attendance more reliable. This data shows us that there would be a need for such a system and there are multiple benefits from implementing it.

What do you personally like/dislike about F.R.A.M.E?

I like the simplicity of the interface however, for teachers who have no coding experience may find this confusing due to terminology.

I like the clear symbols which make it clear to understand.

I personally like the register system and would be safer especially in schools

Marks you down as late.

The truth of the matter is that facial recognition technology serves only two legitimate purposes: access control and surveillance to make it easier to track down burglars, thieves and trespassers, and is not limited to tracking down criminals, it could also make it easier to find missing children and elderly and could make security checkpoints at airports less intrusive to passengers.

It's a brilliant system, so no dislikes.

UI

I like how simple it is to use, and how reliable it is. I like how it essentially automates the process for staff.

Like the data gathering automatically

[Figure 2.9]

The following question outlined any personal problems or likes of the system that the users had. The majority of the responses were positive, however there were some doubts on whether staff would understand the process and terminology they may need. However, our User Manual covers the basics of the system and how to navigate it from both a staff and student perspective. Our users found that it was clear to understand, and they liked that it gathers data automatically and automates a current tedious process for staff.

Is there anything you would change/add to the system?

No

maybe a built in tutorial

A photograph without hats similar to passport requirements

No, maybe instructions for students in regards to no hats / sunglasses and which angle to position face in front of camera etc.

Is the technology capable of private and public CCTV camera networks?

No.

Style changes

More analytics.
Password for teacher login or disabling escape key until class ends.

No - except for nicer complimentary colours to be more of a better visual aspect (that's me being picky)

[Figure 2.10]

We decided to allow the users an option to decide if they would like to add or change anything about the current system. These notes can be used in future versions to help us understand user requirements first-hand. Multiple users suggested to make a in-built tutorial or instructions for students regarding a no-hat policy. This was a suggested feature, but we found that our facial recognition worked well, regardless of hats or glasses. However, this area should be expanded upon, possibly with an information label that users can interact with to demonstrate how to use the system. Other users suggested minor style changes, such as the background as well as adding more variety of data analytics. This is included in potential future options within our technical report and we feel that this is an area that should be expanded upon greatly. Some users didn't have anything else they would change or add, which demonstrates that out system encompasses a complete attendance monitoring system in one.

Other (if you have any other comments)

[Figure 2.11]

We allowed our users to comment anything else they wanted. Some people explained that they liked the idea and would like to see it being implemented within educational institutions.

Conclusion

To conclude our testing analysis document, we understand that there are still many areas where F.R.A.M.E could improve upon, such as the UI or more data analytics options. However, the overall user consensus was that they liked the system and understood how it worked as intended. This demonstrated that our project was easy to use, and our video could be understood by a wide range of users who don't necessarily work within technology. Our testing also revealed that this system could be implemented into an educational institution and would be an improvement on current attendance monitoring systems that are in place today.