

Project for Gesture Based UI Development

Develop an application to demonstrate the use of gestures. You have a choice of technologies available to you and an opportunity to combine a lot of technology that you have worked with over the past four years.

At the very least, this should be a local implementation of the application using gestures to interact with it. You can expand out to include real-world hardware and use this as an opportunity to prove a concept. The Internet of Things is a common phrase, so you could implement a solution taking advantage of hardware like the Raspberry Pi, using the cloud for data transfer and creating a real-world scenario through this medium.

The programming language is your choice and there are several options including JavaScript, C#, C++ and Lua.

Hardware available

- Myo Armbands, Kinect V1, Cortana (or Siri)
- Raspberry Pi, Arduino, Lego Mindstorms
- Other stuff you may have.....

Requirements

Write up the project under the following headings

Purpose of the application – design of the application including the screens of the user interface and how it works. The application can be an experimentation process for you, testing how pieces of hardware could interact or be combined with gestures. You don't have to solve the world economic crisis just yet.

Gestures identified as appropriate for this application – consider how gestures can be incorporated into the application, making a justified argument for the ones that you pick. This is a research element for the project.

Hardware used in creating the application – You are not limited to the hardware listed above. If you have your own hardware, or hardware simulator that you wish to use, then feel free. The purpose of each piece of hardware should be given with a comparison to other options available.

Architecture for the solution – the full architecture for the solution, including the class diagrams, any data models, communications and distributed elements that you are creating.

Conclusions & Recommendations – Conclusions are what you have learned from this project and the associated research. Recommendations are what you would do differently if you were to undertake the project again.

Marks Awarded

Project is worth 60% of the module marks and is to be submitted through Git , with marks awarded in the following areas

- Gesture consideration and use - 15%
- Basic solution implemented and working (the code part) - 50%
- Architecture - use of cloud services, interaction with other hardware, real-world solution - 15%
- Documentation - 10%
- Class presentation - 10%

Remember, that Thalmic have a marketplace for applications developed using the Myo armband, so it may be worth having a look there to see the type of projects that are ongoing. If you do release an app to here, please highlight this.