BSc in Computing in Software Development

Year 4

Applied Project and Minor Dissertation

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# GitHub Link:

<https://github.com/ArekMamala/FinalYearProject>

# Introduction

For our project we wanted to make a wearable wristband that allows a user to keep track of how many punches hit an object, tracking the speed of movement and calculating the beats per minute whilst continuously punching. We also want to connect the wristband to a laptop/phone, so the user can get all his information tracked and displayed in an elegant and sleek app.

# Reason for Choosing Project

The reasons that we decided to develop this application is because we find this idea very interesting. Sports is a topic that we are all involved in inside of college and out. We came up with this idea when we were at a boxing class when we couldn't decide who had more power. It’s a project that we feel will challenge us in developing it and get it working the way we have designed it.

# Technologies you plan to use

The technologies we plan on using are:

1. Web servers to store our data (AWS)
2. Wearable tracker
3. Angular
4. Javascript/C+
5. Google Drive

# Architecture

The application on the phone is going to work with user control. The application is going to count punches, update datasheet, calculate the BPM of user while punching. This app is going to be an alternative to the research of the wearable device. User will have three options within the application.

1. Calculate the number of punches against time.
2. Calculate the number of punches and beats per minute against time.
3. Open data log sheet to view their history. To view their progression.

# Work Allocation

## First Step

We are allocating this project into three sections. Firstly, we are going to start our research. We are going to deeply research in how this wearable device is going to work and what it takes to develop this new piece of technology. We need to understand what language is going to be used in constructing this. We need to know what sensors are required and how all data is going to be recorded.

## Second Step

During the term our research is going to be a piece of document in how this wearable device can be achieved and possible drawing and animations of how it may work. But to back up our research, we need a physical piece that we can show and present. So, we as a group decided to construct an application that is downloadable on mobile phone.

This phone application is an alternative to the wearable device. The application is going to record the number of punches. The application is going to record and store data. For example, is it going to store the number of punches under a certain amount of time?

## Third Step

Whilst two members of the team are constructing the application. One person is going to specifically manage the database. They will have the responsibility to create the AWS account and link it up to the database. Overall, they are responsible for the whole database section of this project and to link it up to the application, that is works efficiently.