**Final Project**

My final project is a imitation of the Flappy Bird but to control the bird object with your eyebrows (to move the bird object up and down) and mouth/jaw (to move the bird object horizontally).

1. Provide a description of the creative motivation and intended use(if applicable) of your project. Why did you make it? Who do you envision using it, and where/when/why?

The creative motivation behind my project was that I wanted to control a 3d object with intricate features of the human body, in this case the face. The reason is because it will get a user interested into a game/programme because it’s something that they would use for something creative. I imagine people who want to try something different to regular control systems to use my project.

1. How does your project relate to existing work ?(Cite existing academic work using academic references, and provide URLs to existing work on the web.)

My project relates to a lot of unity game developers who use OpenCV who use body features from cameras to control 3D objects.

<https://www.youtube.com/watch?v=cGR30llvamU&t=19s>

1. Describe how you implemented the project. What machine learning and/or data analysis techniques have you used, and why? What software tools or libraries did you use? What datasets did you use? Etc.

In my project the main Machine Learning technique I used was Neural Network. I needed to use a regression algorithm because I needed a 3d to move accordingly with facial features, so I needed a algorithm to assign values to specific points

I used FaceOSC to track the facial features, processing to receive OSC message and make it part of a game I designed myself. I used Wekinator to facilitate the messages between the two programmes.

I used oscP5 and netP5 libraries to send and recive OSC messages

1. How successful was your project in meeting your creative aims. What works well? What challenges did you face? What might you change if you had more time?

My project was successful for a object in a game to follow facial features coming through a camera

However the challenges I did face was having accuracy with the object and the face controlling it

Unfortunately I was not able to finish my project but if I had more time I would make the object control more accurate and the game complete

1. Please clearly state which third-party resources(e.g.,code,data)you have used, and state of which aspects of the project are your own work.

FaceOsc – online frm FaceOC

Wekinator

Processing was originally fro, <http://www.wekinator.org/examples/> Simple continuous color control but I changed the draw function and setip to make it suit my project

1. Open FaceOSC, Wekinator and finalproject.pde and make wekinator look like this :



It should then work

1. Will be shown in video