**Hand movement Project**

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Neural Networks and Fuzzy Logic

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# Introduction

* What is the context in which this is applied?
* What is the goals that we hope to achieve?

In a world where technology is evolving, it is important to begin to develop strategies to assist technology with adapting to the various constraints that humans have. This includes developing interfaces or platforms where communication between each other is strengthened or improved.

The overall goal of this project is to provide a strategy to recognise hand gestures and control music through the interaction of the hand and its respective movement.

The context arises when your hands are unable to perform adequately due to:

* Hands being unclean
* One of the hands are busy

As such our project aims to provide a test platform that can be further built upon and utilised using a neural network.

Our goals for this project are:

1. Decide on 4 hand gestures to recognise
2. Capture 4 hand gestures in terms of x, y, z coordinates across a period of 200 milliseconds
3. Train a neural network to recognise the 4 hand gestures
4. Control music through the computer
5. Combine the music control with the neural network and have the music operated via hand gestures
6. Demonstrate real time control of music

# Background of the project

# System Design

* How is it made?

# Design implementation

# Results and discussion

* Weights made of 1 or 0 often fail to recognise anything, hence some randomness is needed
* A single neuron cannot recognise more than one thing

# Conclusion and future directions

# References

# Appendices