# **MovieGoAR- An Interactive Movie AR application using Image Processing**

## Rusiru Madusha Jayamanne

A Dissertation Submitted in Partial Fulfilment of the Requirement for Bachelor of Science (Honours) Degree in Computer Science

Department of Computing

Informatic Institute of Technology, Sri Lanka
in Collaboration with
University of Westminister, UK

2020

### **Abstract**

With Augmented Reality being one of the cutting edge technologies, it has come to a time where a concept is objectified to interact with human users rather than complying with letters and numbers. It is found that it is more effective for a user to interact with motion, in this scenario Augmented Reality, to convey the most relevant information more efficiently and accurately which is specific to the user. This project becomes more viable when it co-ordinates with image processing with regard to AR in hand.

According to the research done so far, dozens of projects have been found related to the conseptual use of Augmented Reality and speech recognition, but yet least number of hits pertain to the problem domain related to the project. Thus, MovieGoAR seems to tackle the hindances and gaps that demotivates the actual purpose of Augmented Reality and interaction.

All the model related data was trained using Python Framework and Android used for visualizing the training data and output. Implemented systems were tested thoroughly under different conditions and the system was evaluated by several masters of various domains. Eventually, the test results attested that the analysis, design, implementation and documentation has been carried out in ain effective and in an efficient manner.

### Subject descriptors.

**Augmented Reality Digital Communication** 

#### Keywords.

Image Processing, Convolutional Neural Networks, Speech Recognition, Deep Learning, Semi Supervised Learning