

# COMPUTATIONAL INTELLIGENCE ASSIGNMENT

## TENSORFLOW ASSIGNMENT

By  
Aaron Ward

Supervisor(s):

SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF  
B.SC IN COMPUTING AND INFORMATION TECHNOLOGY  
AT  
INSTITUTE OF TECHNOLOGY BLANCHARDSTOWN  
DUBLIN, IRELAND  
2017

## **Declaration**

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of **B.Sc in Computing and Information Technology** in the Institute of Technology Blanchardstown, is entirely my own work except where otherwise stated, and has not been submitted for assessment for an academic purpose at this or any other academic institution other than in partial fulfillment of the requirements of that stated above.

Dated: 2017

Author:

---

Aaron Ward

# Introduction

The goal of this assignment is to design a multiple layer neural network using the Tensorflow Library for a predictive model. Many factors will be taken into consideration for this project, such as the number of nodes needed in each layer, the number of layers and different learning rates. This report will document the two phases in implementing a neural network: Network Training and Network Evaluation. During training the model shall be trained by experimenting with different hyper parameters and the evaluation phase will load the trained model and test the metrics of the model in regards to data that it has not seen. The data being used consists of 500 rows of example data and 100 rows for evaluation.

The structure of this report will go by a design section with illustration, the training process and the evaluation process, then followed by a conclusion.

# **Assignment**

**Design of Network**

**Network Training**

**Network Evaluation**

**Conclusion**