CMP3753M Project Proposal

Luke Roberts

University of Lincoln
25722923@students.lincoln.ac.uk

1 Introduction

Deep Learning has recently revolutionised both scientific research and modern life in a profound way. From categorisation of X-rays images in the medical field; machine translation of natural language such as Google Translate and large text generation models such as ChatGPT, deep learning has become the best way to categorise and generate unstructured data. To do many of these tasks which were once thought impossible, machine learning engineers create deep learning models which utilise a dataset that learns patterns about that data. Image classification is a popular type of deep learning and is used for a wide variety of applications in scientific research. Like all forms of deep learning, image processing models are trained so that they more accurately categorise new input data []. At the start of training, the model performs poorly when tested, however through analysing how the output fails, the model can tweak its own parameters in order to achieve greater accuracy. The choice of which machine learning model to use and the specific hyperparameters are important for maximising the efficiency of the model. This can be due to the content and quality of the training data being used [].

2 Aims and Objectives

2.1 Aims

2.2 Objectives

3 Project Plan and Risk Analysis

3.1 Project Plan

3.2 Risk Analysis

References