# Introduction to Deep Learning Assignment 2

**Group 53**

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## Task 1

## Task 2

## Task 3

### 3.1 Datasets

We use two datasets in Task 3. Firstly, we explore the performance of different model architectures and the effects of different parameters with MNIST data. After that, we leverage the power of generative models on Butterfly & Moths data.

We directly call Tensorflow API to download the MNIST dataset. However, the original dataset is also available on https://deepai.org/dataset/mnist. MNIST dataset contains 70,000 grayscale images (28 $\times$ 28 $\times$ 1), whose content is handwritten numbers.

Butterfly & Moths is an open source dataset on Kaggle. There are 13,639 RGB images (224 $\times$ 224 $\times$ 3) composed of 100 butterfly or moth species. Link of the dataset is https://www.kaggle.com/datasets/gpiosenka/butterfly-images40-species?resource=download.

### 3.2 Experimental Set-up

All experiments are deployed on two servers. Server 1

#### 3.2.1 MNIST

We modify the

### 3.3 Results

### 3.4 Discussion: Model Comparison

## Contributions