Phase -0: Topic Selection

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COMP 455: Extreme Computing

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# **Group Members**

Group 5 has two members:

* Chinmay Sharma (300157594)
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# **Project Topic**

Our topic for the term project will be on image classification.

# **Description**

This project will train a convolutional neural network to perform multi-class classification on newer images. We will create and fine-tune the model ourselves to provide results with high accuracy.

# **Expected Results**

The model will be able to classify the input image according to 10 classes and will provide high accuracy in classified images.

# **Dataset**

For our dataset we will be using CIFAR-10, which consists of 60,000 32x32 colour images in 10 classes, with 6000 images per class. There are 50,000 training images and 10,000 test images.

# **Tools**

We will be using tools like TensorFlow, Keras and CNNs. For python libraries, we haven’t really decided what we will be using for certain but for image classification we think that libraries like Scikit-image, Matplotlib and OpenCV would be great choices. Along with these, we will also use scikit-learn, pandas and numpy for data processing.