**Image Classification using Convolutional Neural Networks**

**ABSTRACT**

In recent years, due to the explosive growth of digital content, automatic classification of images has become one of the most critical challenges in visual information indexing and retrieval systems. In this paper, our system uses deep learning algorithm to achieve the expected results in the area like computer visions. Our system present Convolutional Neural Network (CNN), a machine learning algorithm being used for automatic classification the images. Our system uses the data set as a bench mark for classification of images. The images in the data set used for training which require more computational power for classification of images. By training the images using CNN network we obtain the 98% accuracy result in the experimental part it shows that our model achieves the high accuracy in classification of images.

**EXISTING SYSTEM**

In recent year, with the speedy development in the digital contents identification, automatic classification of the images became most challenging task in the fields of computer vision. Automatic understanding and analysing of images by system is difficult as compared to human visions. Several research have been done to overcome problem in existing classification system, but the output was narrowed only to low level image primitives. However, those approach lack with accurate classification of images.

**Disadvantages of Existing System:**

1. Accuracy is less.
2. Existing systems process only low level images.

**PROPOSED SYSTEM**

In this paper, we used Convolutional Neural Networks (CNN) for image classification using images form hand written MNIST data sets. This data sets used both and training and testing purpose using CNN. It provides the accuracy rate 98%. The computational time for processing these images is very high as compare to other normal JPEG images. Stacking the model with more layers and training the network with more image data using clusters of GPUs will provide more accurate results of classification of images.

**Advantages:**

1. Proposed systems process high level images in an effective way.

2. Accuracy is more.

**SYSTEM REQUIREMENTS**

**HARDWARE REQUIREMENTS:**

# Processor - Pentium –IV

* Speed - 1.1 Ghz
* RAM - 256 MB(min)
* Hard Disk - 20 GB
* Key Board - Standard Windows Keyboard
* Mouse - Two or Three Button Mouse
* Monitor - SVGA

**SOFTWARE REQUIREMENTS:**

* Operating System - Windows7/8
* Programming Language - Python