**DAY 01**

I have concentrated on choosing an image processing project that makes use of convolutional neural networks (CNN) on the first day of my online internship.

**Image processing**

The modification and analysis of digital pictures fall under the umbrella of this important discipline. It may be used for a wide variety of things, including object identification and autonomous cars as well as medical imaging.

**Convolutional Neural Networks for Image Processing**

CNNs have demonstrated considerable potential in image processing jobs. They are particularly suited for applications like image classification, object identification, and image segmentation because they can automatically learn hierarchical representations from pictures.

*CNN Architectures*

* LeNet
* AlexNet
* VGGNet
* GoogLeNet
* ResNet

*Reference*

<https://medium.com/analytics-vidhya/cnns-architectures-lenet-alexnet-vgg-googlenet-resnet-and-more-666091488df5>

<https://towardsdatascience.com/various-types-of-convolutional-neural-network-8b00c9a08a1b>

**Project: Google Recaptcha**

Almost **12000** images used in Google Recaptcha V2 collected by category more than 500 of which with manual markup for training object detection model such as YOLO. The dataset consists of **2** directories. The images directory contains **12** directories containing images in various categories such as: Bicycle, Bridge, Bus, Сar, Chimney, Сrosswalk, Hydrant, Motorcycle, Palm, Stair, Traffic light and Other.

*Reference*

<https://www.kaggle.com/datasets/mikhailma/test-dataset>

<https://www.kaggle.com/code/ahmedhossam666/google-recapthca>

<https://www.kaggle.com/code/csujith0210/google-recapthca/edit>

