EXISTING SYSTEM

The Existing system converts the images in to text data using Artificial Neural Network (ANN) and Machine learning (ML). The accuracy and prediction are less accurate and time consumption is more.

**The Limitations of Machine Learning:**

* Each narrow application needs to be specially trained.
* Require large amounts of hand-crafted, structured training data.
* Learning must generally be supervised: Training data must be tagged.
* Require lengthy offline/ batch training.

PROPOSED SYSTEM

OpenCV is a Python library which is designed to solve computer vision problems. OpenCV was originally developed in 1999 by Intel but later it was supported by Willow Garage.

OpenCV supports a wide variety of programming languages such as C++, Python, Java etc. Support for multiple platforms including Windows, Linux, and MacOS.

OpenCV Python is nothing but a wrapper class for the original C++ library to be used with Python. Using this, all of the OpenCV array structures gets converted to/from NumPy arrays.

This makes it easier to integrate it with other libraries which use NumPy. For example, libraries such as SciPy and Matplotlib.

Next up on this OpenCV Python Tutorial blog, let us look at some of the basic operations that we can perform with OpenCV.

Convolutional neural networks have been one of the most influential innovations in the field of computer vision. They have performed a lot better than traditional computer vision and have produced state-of-the-art results. These neural networks have proven to be successful in many different real-life case studies and applications, like:

* Image classification, object detection, segmentation, face recognition;
* Self driving cars that leverage CNN based vision systems;
* Classification of crystal structure using a convolutional neural network;
* And many more, of course!

The convolution layer computes the output of neurons that are connected to local regions or receptive fields in the input, each computing a dot product between their weights and a small receptive field to which they are connected to in the input volume. Each computation leads to extraction of a feature map from the input image. In other words, imagine you have an image represented as a 5x5 matrix of values, and you take a 3x3 matrix and slide that 3x3 window or kernel around the image.