

IMAGE PREPROCESSING PREQUISITES:

INTRODUCTION:

When building a machine learning/computer vision project, one thing we always need is data. In this case, image data.

Unfortunately, a few problems associated with image data include complexity, inaccuracy, and inadequacy. This is why before building a computer vision model, it is essential that the data is preprocessed (cleaned and processed to the desired format) to achieve the desired results.

In this tutorial, we shall be looking at image data preprocessing, which converts image data into a form that allows machine learning algorithms to solve it.

It is often used to increase a model's accuracy, as well as

reduce its complexity.

There are several techniques used to preprocess image data. Examples include; image resizing, converting images to grayscale, and image augmentation.

PREQUISITES:

To follow through the tutorial, one needs:

A Google Colab, or Kaggle account. You may also use Python and Jupyter Notebook installed on your machine.

Some basic knowledge of Python.

In this tutorial, we shall be using Google Colab. So, after creating a new notebook, the first step will be to load data into our colab environment.

```
from google.colab import drive  
drive.mount("/content/drive/
```

The next step is loading the dataset to colab. To import the

dataset, we first need to import some of the necessary libraries.

```
# importing libraries
```

```
import tensorflow
```

```
import keras
```

```
import os
```

```
import glob
```

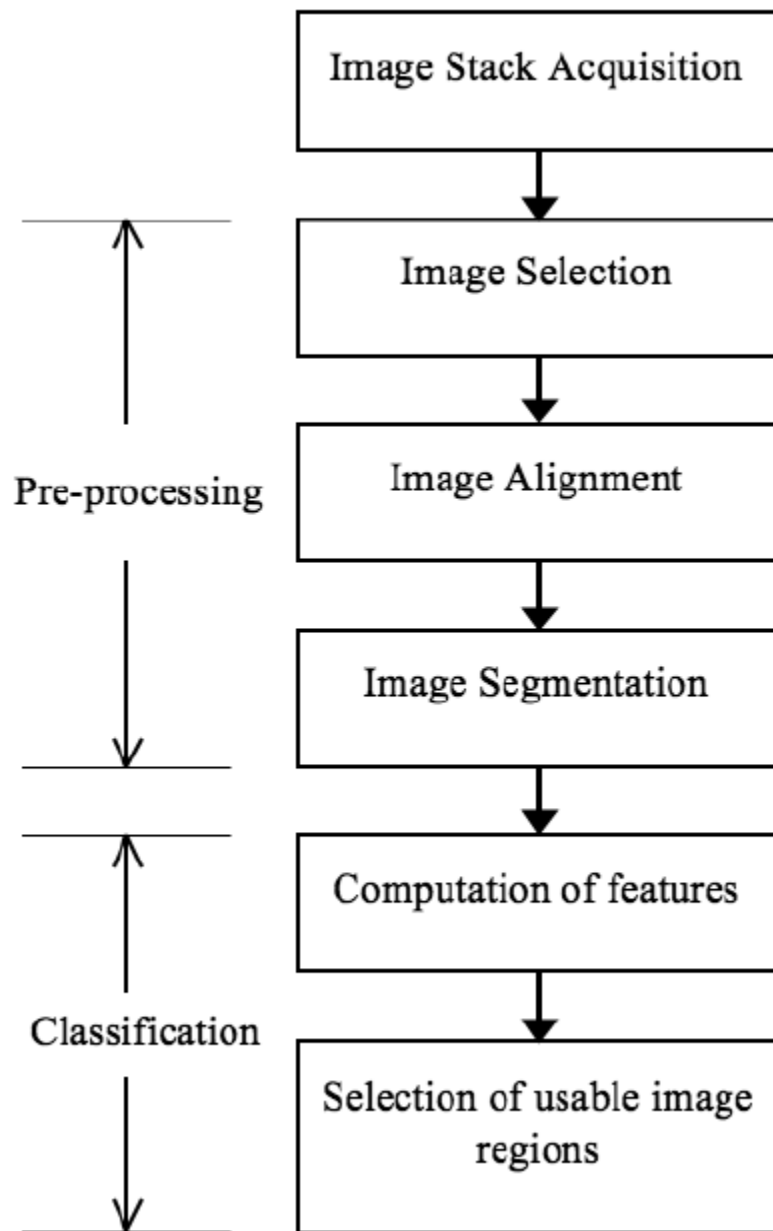
```
from skimage import io
```

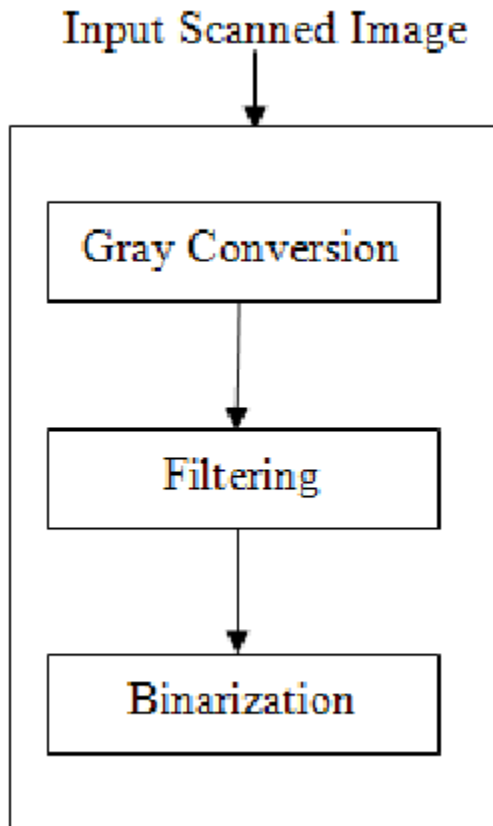
```
import random
```

```
import numpy as np
```

```
import matplotlib.pyplot as plt
```

```
%matplotlib inline
```





The architecture of IBM Visual Insights consists of hardware, resource management, deep learning computation, service management, and application service layers. Each layer is built around industrystandard technologies.