

Selected Topics in Computer Science – 2 P R O J E C T (C O V E R S H E E T)

Team Number : 11

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Paper Details

A) Its citation :

1) Authors name :

Chaitanya Aa, Jayashree Shettya, Priyamvada
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2) Paper name :

Food Image Classification and Data Extraction Using
Convolutional Neural Network and Web Crawlers.

3) Publisher name :

Procedia Computer Science 218.

4) Year of publication :

2023

B) Details

1) The dataset used:

Food 101

Link :

<https://www.kaggle.com/datasets/dansbecker/food-101>

2) the implemented algorithms:

Convolutional Neural Network and Web Crawlers

3) Its Results :

When using CNN the model gave accuracy 70%, then they applied web crawlers concept and the model gave accuracy 92%.

Project Description Document:

A) General Information on the selected dataset:

1. name of the dataset used :

Food-11 image dataset

2. the link of dataset :

Link:

<https://www.kaggle.com/datasets/trolukovich/food11-image-dataset>

3. the total number of samples in the dataset :

Total : 6,727 images.

Training Set : 3,446 images.

Validation set : 1,963 images.

Evaluation Set : 1,318 images.

4. the dimension of images :

dimension : 512x512.

5. number of classes and their labels :

8 classes , labels from 0 to 7

B) Implementation Details :

1. ratio used for training, validation, and testing :

Ratio : 80%, 20%,20%

2. specify the number of images in each :

Training Set : 3,446 images.

Validation set : 1,963 images.

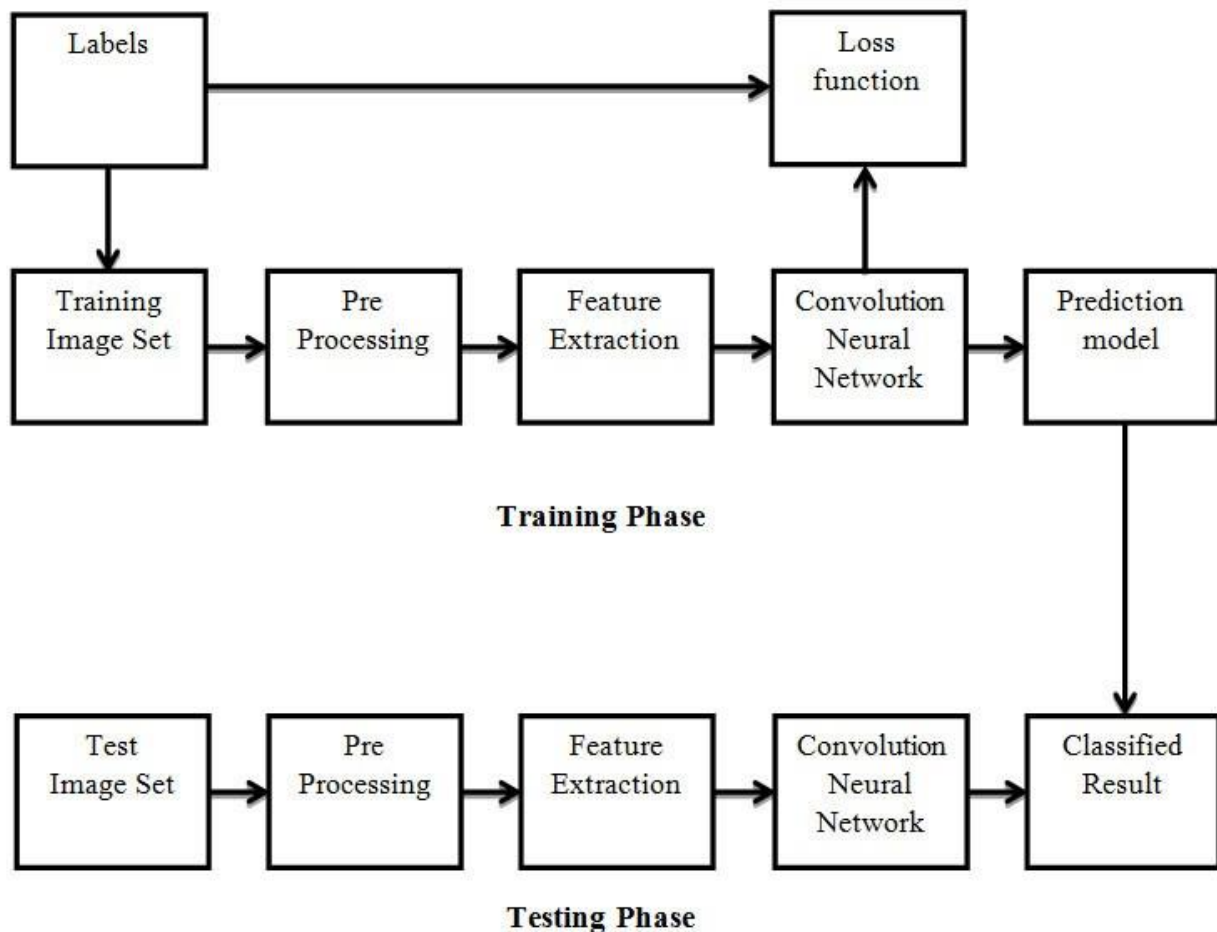
Evaluation Set : 1,318 images.

3. Specify any hyperparameters :

- Shear Range : 0.2.
- Zoom Range : 0.2.
- Horizontal Flip : true.

- Batch size : 32.
- New dimensions of images : 224 x 224.
- Activation functions : relu and softmax (output layer).
- No. of epochs : 50.
- 3 hidden layers (has 64 or 128 neurons).
- Optimizer : Adam

4. A block diagram :



C) Results Details :

1.Measures :

- Loss : 11%
- Accuracy : 61.3%
- Recall : 55.7%
- Precision : 67.9%