

**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 :**

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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

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### **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%.

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# **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

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### ***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.

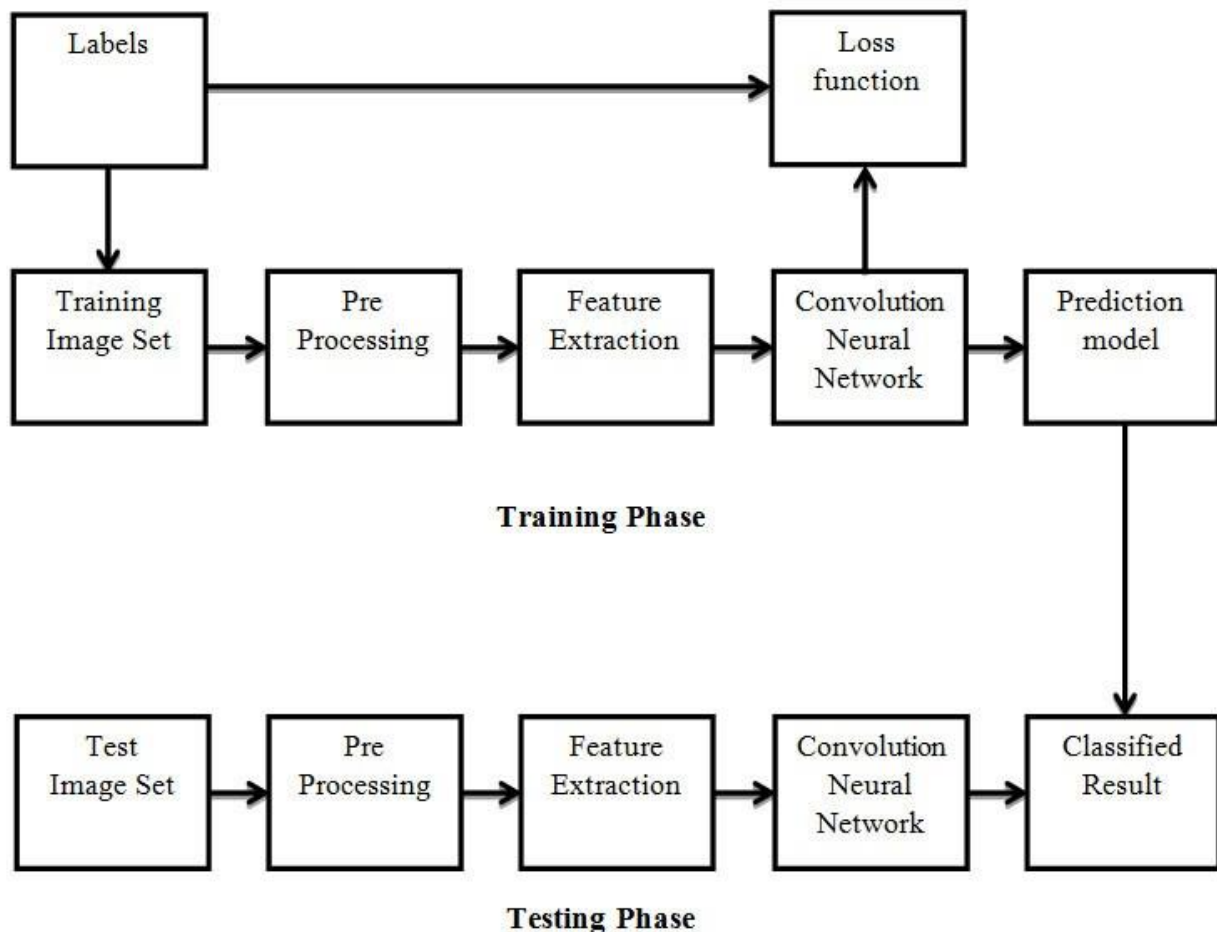
Evaluation Set : 1,318 images.

#### 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.

- 3 x 3 kernal
- Activation functions : relu and softmax ( output layer ).
- No. of epochs : 50.
- 3 hidden layers.
- Optimizer : Adam

#### 4. A block diagram :



### ***C) Results Details :***

## 1.Measures :

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