

## Data Collection and Preprocessing Phase

Date	15 March 2024
Team ID	SWTID1720027196
Project Title	Greenclassify: Deep Learning-Based Approach For Vegetable Image Classification
Maximum Marks	2 Marks

### Data Collection Plan & Raw Data Sources Identification Template

Elevate your data strategy with the Data Collection plan and the Raw Data Sources report, ensuring meticulous data curation and integrity for informed decision-making in every analysis and decision-making endeavor.

### Data Collection Plan Template

Section	Description
Project Overview	<p>Know fundamental concepts and techniques of Convolutional Neural Networks.</p> <p>Gain a broad understanding of image data.</p> <p>Know how to pre-process/clean the data using different data preprocessing techniques.</p> <p>know how to build a web application using the Flask framework.</p>

Data Collection Plan	<pre>!mkdir -p ~/.kaggle !cp kaggle.json ~/.kaggle/ !chmod 600 ~/.kaggle/kaggle.json  ! kaggle datasets download -d misrakahmed/vegetable-image-dataset  Downloading vegetable-image-dataset.zip to /content 99% 529M/534M [00:05&lt;00:00, 146MB/s] 100% 534M/534M [00:05&lt;00:00, 95.6MB/s]  !unzip vegetable-image-dataset.zip</pre>
Raw Data Sources Identified	<p>This dataset contains three folders:</p> <ul style="list-style-type: none"> <li>? train (15000 images)</li> <li>? test (3000 images)</li> <li>? validation (3000 images)</li> </ul> <p>each of the above folders contains subfolders for different vegetables wherein the images for respective vegetables are present.</p>

### Raw Data Sources Template

Source Name	Description	Location/URL	Format	Size	Access Permissions
Dataset 1	The initial experiment is done with 15 types of common vegetables that are found throughout the world. The vegetables that are chosen for the experimentation are-	<a href="https://www.kaggle.com/datasets/misrakahmed/vegetable-image-dataset">https://www.kaggle.com/datasets/misrakahmed/vegetable-image-dataset</a>	jpg	571.74 MB	Public

	<p>bean, bitter gourd, bottle gourd, brinjal, broccoli, cabbage, capsicum, carrot, cauliflower, cucumber, papaya, potato, pumpkin, radish and tomato. A total of 21000 images from 15 classes are used where each class contains 1400 images of size 224×224 and in *.jpg format. The dataset split 70% for training, 15% for validation, and 15% for testing purpose.</p>				
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