



Vegetable Identification using **Transfer Learning**

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Objectives

- 1] To Identify and label vegetables from 18 different varieties grown in the farm.
- 2] Integrate with logging system to automate the process.
- 3] Identified Vegetables, its quantity and image are automatically updated on GH Farm website.



Setup



- Vegetables like Lady's finger, Cucumber, Tomato, Brinjal, Bitter Gourd, Bottle Gourd, Cabbage, Cauliflower, Spinach, Fenugreek, and many more can be identified.

Methodology and Process Overview

- 1] Scrapped Images from Imagenet and took live images from market.
- 2] Final data : 27,000 Images.
- 3] Used Inception-v3 model for transfer learning.
- 4] Image captured during weighing is feeded back to the system for re-training that automatically occurs once in every 3 days.
- 5] Accuracy achieved : 99.5%