Programming for Internet of Things

Object tracking and IoT Grocery Sync

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Task/Problem

- A kitchen-based system that allows you to effortlessly add items to your grocery list.
- Simply show the food product to the camera, and it will automatically update your 'grocery cart'. such as an Apples, water, yogurt, cereal, oil, etc.

Components of the system

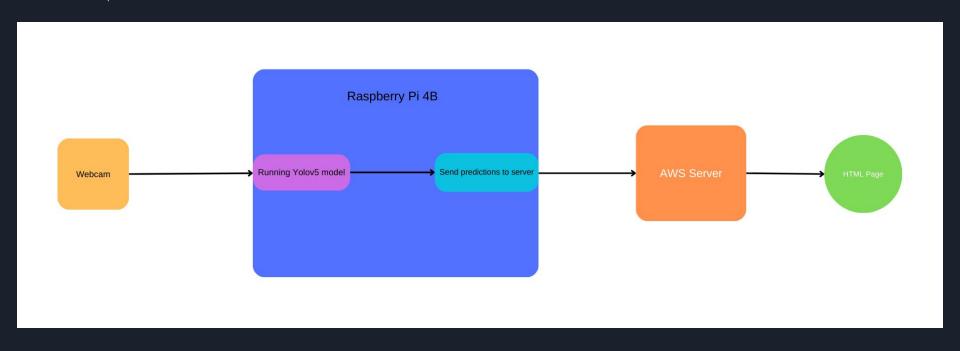Hardware Components:

- Raspberry Pi 4B
- Webcam

Software Components:

- Yolov5 - Deep learning model for object tracking and classification.
- Node server.
- Webpage to track the grocery list .
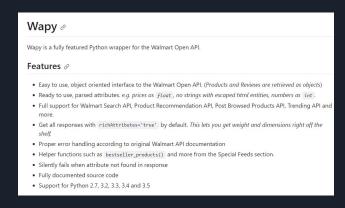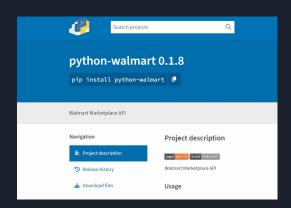- Api to show product reviews and stocks.

Interactions

Tradeoffs

- Can detect only a predefined set of objects that are trained into the Deep learning model.
- Walmart api (maybe)
- Use python api available to scrape the product data like reviews, stocks etc which can be displayed on the webpage.

Wapy 🔗

Wapy is a fully featured Python wrapper for the Walmart Open API.

Features 🔗

- Easy to use, object oriented interface to the Walmart Open API. (*Products and Reviews are retrieved as objects*)
- Ready to use, parsed attributes. *e.g. prices as* `float` , *no strings with escaped html entities, numbers as* `int` .
- Full support for Walmart Search API, Product Recommendation API, Post Browsed Products API, Trending API and more.
- Get all responses with `richAttributes='true'` by default. *This lets you get weight and dimensions right off the shelf.*
- Proper error handling according to original Walmart API documentation
- Helper functions such as `bestseller_products()` and more from the Special Feeds section.
- Silently fails when attribute not found in response
- Fully documented source code
- Support for Python 2.7, 3.2, 3.3, 3.4 and 3.5

Search projects 🔍

python-walmart 0.1.8

`pip install python-walmart` 📋

Walmart Marketplace API

Navigation

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Project description

`pypi` `v0.1.8` `build` `unknown`

Walmart Marketplace API

Usage

Tech stack

- Python
- Pytorch
- Node js
- Javascript, HTML, CSS
- API - (WApy or Python-Walmart)
- MongoDB

Challenges

- Optimizing the Deep learning model.
- Avoid accidental detection of the object.
- Finding the right product from a list of similar products with some criteria.

Timeline

-

1 DATA COLLECTION — OCT 27

NOV 03

2 MODEL TRAINING

3 CREATE NODE SERVER

NOV 10

4 MAKE A WEBPAGE — NOV 17

NOV 24

5 INTEGRATE API