



# ShopRec

## Computer Vision Recommendation System

For Your In-store Personalized Clothing Recommendations



### Features

- In store interactive Computer Vision interface for clothing detection.
- Personalized recommendation systems for in store products across multiple stores based on customer preferences.



### Why Shop Rec

- Retail shopping struggles against the growth of e-commerce, who use innovative technologies.
- Few recommendation systems exist across multiple stores.
- ShopRec applies across multiple stores, and uses the latest image recognition technology.

## Data & Model Development

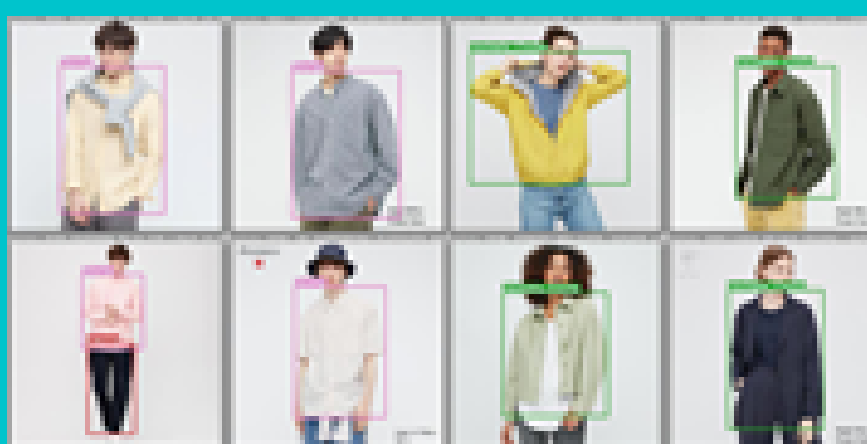
### 1. Data Sourcing

- Clothing images scraped stored and labelled with boundary boxes
- User database created



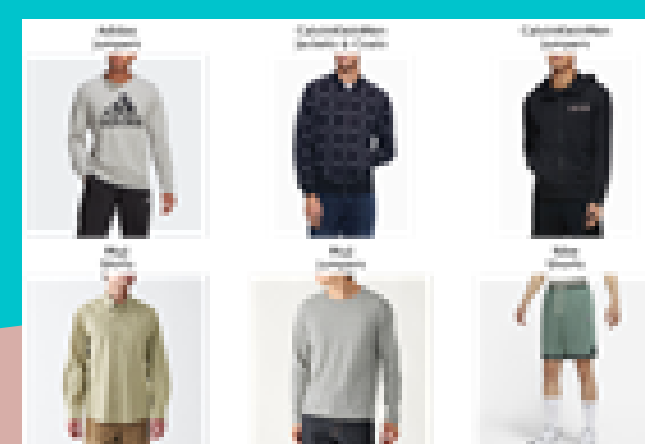
### 2. Model Training

- YOLOv5 image recognition model trained on 6000 images, and 12 classes.
- Model accuracy of c. 70%



### 3. Model Deployment

- Image recognition and recommendation system deployed onto Streamlit user interface.



## App Walkthrough

App interface streams user input through camera

Model identifies and labels user clothing categories

If available, nearest neighbours are found based on shopping history similarity. Recommended items are returned based on most popular products.

