

Choice of dataset

We chose the GroZi-120 dataset to develop our model, which identifies items being placed into shopping carts. This dataset is particularly relevant due to its comprehensive collection of grocery product images, captured both in controlled laboratory settings and within the authentic backdrop of grocery stores. The inclusion of natural, non-white backgrounds is a significant advantage, offering a realistic representation of the complex environments encountered in shopping scenarios. This feature is critical for enhancing the model's precision, as it trains the algorithm to recognize and differentiate items amidst the typical visual clutter of a shopping cart. By utilizing a dataset that mirrors the genuine conditions of grocery shopping, our model is better equipped to accurately identify products, regardless of the surrounding distractions. This approach ensures that the model is not merely theoretical but highly applicable to real-world situations, making it an invaluable tool for navigating the intricacies of retail environments.

Application

Our application harnesses AI to enhance the shopping experience by smartly predicting what you're likely to need on your next trip to the store. As a shopper, you manually trigger a webcam installed in your cart to take snapshots of the items you're buying. Just push a button to capture the image. Once you're done shopping, the model gets to work, analyzing the images from your current and past shopping trips. It picks up on your buying patterns, like those weekly essentials and the monthly restocks, to curate a personalized shopping list tailored just for you. You'll receive this list through a dedicated app, where you can review and edit it before your next store run. This feature not only reminds you of what you're running low on but also discovers what you love buying regularly, making sure your pantry is always stocked with your favorites.