Innovation Lab Interview Project

Motivation

The Innovation Lab is looking for engineers who exhibit a strong technical background in full stack software development as well as engineers who are passionate about the things they build. Here is an opportunity to stand out from the crowd and demonstrate how you can be an excellent team member of NCR's Innovation Lab.

Project Background

At NCR, we innovate for the industries we serve: Retail, Hospitality, and Financial. For this project, you will focus on Retail. The goal is to develop an application for charitable thrift store to automate their listing process.

Project Description

Develop an application that enables a charitable thrift store employee to take a picture of a donation and automatically label what that donation is. Once the donation is properly labeled the donation is then listed on the thrift store's website. A consumer could then browse the website for potential purchases.

Requirements

1. UI for Thrift Store Employee to Take Picture of Donation and Classify Item Name
    - Web or Native is acceptable
    - 5 unique items are recognized with high confidence
2. Item Name Verification
    - Employee could Rename Item after Classification
3. UI for Consumer that lists items that have been donated
4. Backend to maintain items donated
5. Prepare a presentation that includes descriptions of:
    - The problem you attempted to solve.
    - The ideal solution (if you had one year).
    - The solution you developed during the given time period.
    - The value this provides to a thrift shop owner and consumer.
    - Technical decisions you had to make.
    - Time management decisions you had to make.
    - What you learned.

6. The source code for the solution should be provided directly as a zip file, or as a link to an online source repository such as Github. In addition to the code, a set of instructions for building and running the application should be provided.
7. Although Python and Javascript is preferred, the choice of language and frameworks is at your discretion. Ideally, the application will run as a simple process/executable or within a provided container and not require an external server or datastore to run.

Bonus

1. Save Images and Labels to enhance future iterations of the classification model
2. Ecommerce experience for Consumer
3. Recognizes more than 5 items

Resources

1. Firebase
2. React
3. Angular
4. Docker
5. https://cloud.google.com/vision/
6. https://azure.microsoft.com/en-us/services/cognitive-services/computer-vision/