Tell us what your idea is.

More than 300 million people in the world suffer from some form of color blindness. That's a lot of people - about the population of the United States of America.

People suffering from color blindness have difficulties in doing the most basic tasks that we take for granted, especially when it comes to food. They often spend an unusually long amount of time at the grocery store since they have difficulties identifying ripe fruits and vegetables. They end up following some baselines: ripe fruits are softer than unripe ones and they smell different too. The article here even talks about how green potatoes can't be easily spotted and how it can be particularly dangerous because of high concentrations of a poisonous substance called solanine.

I am trying to build an app that makes it easier for someone suffering from color blindness to do grocery shopping. The user would be able to point his/her phone at fruits and vegetables stacked at the store and the app would identify which ones to pick.

Tell us how you plan on bringing it to life.

This app is in the prototype stage. I have the basic UI ready, and I am currently working on improving it further. One major obstacle I face in turning this idea into a functioning app is that I have close to zero experience in building ML models on mobile devices. This is an area I could definitely use Google's help with. As someone who uses machine learning at work constantly, I am quite comfortable with building and training models for the web platform. I am also a fast learner, so I am sure that I would be able to grasp the required concepts quickly.

Here is the development timeline for this application:

***December** - Complete work on the UI first so that it can be integrated with the model when it's ready.*

***January** - Use resources online to learn the fundamentals of Tensorflow core and Tensorflow lite*

***February** - Work on building the ML model, equipped with the learnings from the bootcamp at Google.*

***March** - Get the product integrated end-to-end and do some testing*

***April** - Finishing touches and optimizations. (Also buffer time, incase any of the deliverables aren't done)*

***May** - Take off!*

Tell us about you.

I am Rashmi K A, a software developer at Intuit India. I recently completed my undergraduate degree in Computer Science and Engineering in April 2019. At Intuit, I am a member of the cloud engineering team. I work on building scalable infrastructure that allows Intuit's products to run seamlessly.

A lot of my work as an undergraduate was within the field of machine learning. I built a variety of products that leverage the power of ML - from a music recommender system that works based on emotions to an app that uses ML and NFC to make cash-based transactions easier to track. As a result of these experiences, I am confident about my knowledge in the field of machine learning and also of my skills as an Android developer.

I am a passionate coder and I enjoy participating in hackathons. One of my most recent achievements is winning the third prize in a hackathon conducted by DHFL for building them a churn prediction model. During my free time, I enjoy reading. My recent favorites are Educated by Tara Westover and The Color Purple by Alice Walker.