

## Udacity-Passport Kiosk Project Final Reflection

I really enjoyed building this project end-to-end. It was a huge learning experience interacting with the variety of cognitive services Azure has to offer. Each service came with its own challenges, some easy to overcome and others not so easy. I found implementing the Form Recognizer service a very seamless experience with very little setup and quick deployment times which also came with excellent performance when extracting, I was pleasantly surprised. I also had a similar experience when implementing the Face API service. I was very impressed with the accuracy the model had when detecting faces on input documents and when comparing to faces to each other.

I had some challenges when it came to implementing the Custom Computer Vision part of the process. The User Interface at the customvision.ai was a pleasure to use and easy to navigate. I can also say the same when creating tags and bounding boxes in my training images for detecting the lighter. However, I seemed to get unfavorable results when testing the model and it seemed to think any type of rectangular shaped object was a lighter or even some object half off the screen. Even as a test I uploaded an image of a face and it came back at about 90% confidence that there was a lighter in the image.

I feel if I had significantly more training data, I may have had better results. Also maybe adding an extra tag that showed non-lighters. It's speculation at this point, but I feel I was either not implementing something correctly or it just wasn't enough data to make predictions that made sense.

Overall, it has been a wonderful experience building out this project and was a joy combining results from multiple sources for one goal. I would love to hone my skills in this area even more with some interesting side projects that leverage once again these powerful services Azure offer.