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With all the parcel images, we get to feed them into a CNN binary classifier in order to sort them into Parking Lot images and none parking lot images. We spent a lot of time gather training data set from all the parcel images because the data set is really imbalanced. There are a lot less parking lot images, so it will be hard to train the classifier. We went through many parcel images, but ended up with 230 balanced training set, which we can work with. We tried to go online and find any parking lot data set, but most of them are really different from what we obtained. The classifier has 86% accuracy, which is quite good, and we need more parking lot images in order to increase the accuracy.

After collecting and classifying the data set, we found out that only around 15% are parking lot images and the number of parking lots have drastically decreased over time. Covid-19 also influence parking behaviors as less people are leaving home for work.