Problem Statement

Boarding a flight can be very time-consuming especially at the point where validation of The individual documents need to be done manually. What if airports are equipped with Technology to make this whole experience faster and more convenient and at the same time save cost?

My objective is to build an automated boarding kiosk for the customers to stand in front of and quickly have their documents and identity validated. This will enhance their experience when boarding.

Business Considerations

Here are the few reasons we are developing this solution:

- Automation
- Use of technology to improve the boarding experience
- Increase the number of clients

Solution Strategy Walkthrough

- The system will use Azure Form Recognizer to extract information from identification cards and boarding passes.
- Azure Computer Vision, Face services, and Video Analyzer will be used to match a given passenger's face from digital ID with the face extracted from a 30-second video. The same video will also be used to extract the passenger's emotions.
- WE will also detect if a passenger's carry-on items include a lighter or not. We will use Azure cognitive service-based computer vision resources to build a custom lighter detection model first and use the custom model to detect lighter probability in given test images.

Metrics for performance

Custom vision model for lighter detection

- A precision greater than 75% was chosen together with a recall of 100% was obtained. This is good for our model to ensure that is makes good predictions and does not cause inconvenience for clients.S