Segmenting Images

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1 Project Background

Corserva is a managed IT service provider that develops and sells custom software and hardware solutions. Corserva's customers include hospitality and other in-person focused related businesses. Official CDC guidelines to businesses encourage taking steps to prevent the spread of Covid-19 among employees and customers, including temperature checks. Corserva has sponsored this project to produce a thermal screening solution capable of processing people quickly and without requiring user interaction to minimize additional contact.

Preliminary development and testing has already been completed by Corserva. The system uses a thermal and a regular camera to recognize users and read the temperature of their face. If the temperature is above a certain threshold, then an alert is shown and the flagged person can be moved aside for further screening. The first iteration of the thermal app has several problems:

- The camera suffers from temperature drift over time and required frequent callibration.

- The facial recognition process is around 5 seconds, limiting the rate people can be processed.

- Onboarding new users requires interaction directly through the app, not practical for large numbers of employees.

- No option to send an alert to the scanned user.

The new application developed as part of this project will address these problems.

2 Scope

2.1 Project Scope

The scope of this project is to produce an application and companion mobile application to measure and report high temperatures of people passing through the system. The thermal camera will use an auto calibration system to increase accuracy of readings. Mobile application to smooth the onboarding process and provide reports to users.

2.2 Business Scope

The business scope is to provide business with a kiosk and mobile app system that will make it easier for them to maintain safety precautions during the current Covid 19 pandemic while also increasing the speed in which staff and customers can enter their place of business.

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