

DEPARTMENT OF COMPUTER SCIENCE
COLLEGE OF ARTS AND SCIENCES

CSCI 4961/4962 Capstone Project Plan

Title of Project: **Using Serverless Computing to Reunify Families**

Client: Dr. Rachel Charney

Supervisor: Dr. Flavio Esposito

Student(s): Justin Franz, Tanmayi Nagasuri Andrew Wartman

Project Overview:

The goal for this project is to use image and text recognition on a scalable level to help reunify lost children with their parents after a natural disaster using serverless computing.

This will be accomplished using drones that would be sent from a home base and use an infrared camera to detect heat sources that could possibly be a human, then record video for later processing or alert a rescuer of the location. A rescue worker would activate an infrared beacon to alert a drone that someone had been found. The drone would land next to the beacon, and the rescue worker would be able to take a picture of who they rescued.

To do this there will be a web-based front end that would allow the user to search for their lost or missing child, and for someone to be able to upload a image file/text to add to the database. It would then get processed by a back end that would use available information to match the child.

Goals for Deliverable #1:

Research different options for hardware specifications, software specifications, and bases for serverless computing and choose which to use in the capstone project.

Goals for Deliverable #2:

Goals for Deliverable #2: Have a working facial recognition program that gets the features of the child and stores it to the profile, using an open source modular language and use a database that stores information from the image/text processing that will allow the front end to search for a matching profile.

Goals for Deliverable #3:

Create a web front end that would allow for images/text to be uploaded to the back end for processing and allow the user to search

Goals for Deliverable #4:

Deliver final project, with integration of chosen softwares with serverless computing, and possibly with implementation of raspberry pies and drones

Signatures

Students:

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Supervisor:

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Instructor:
