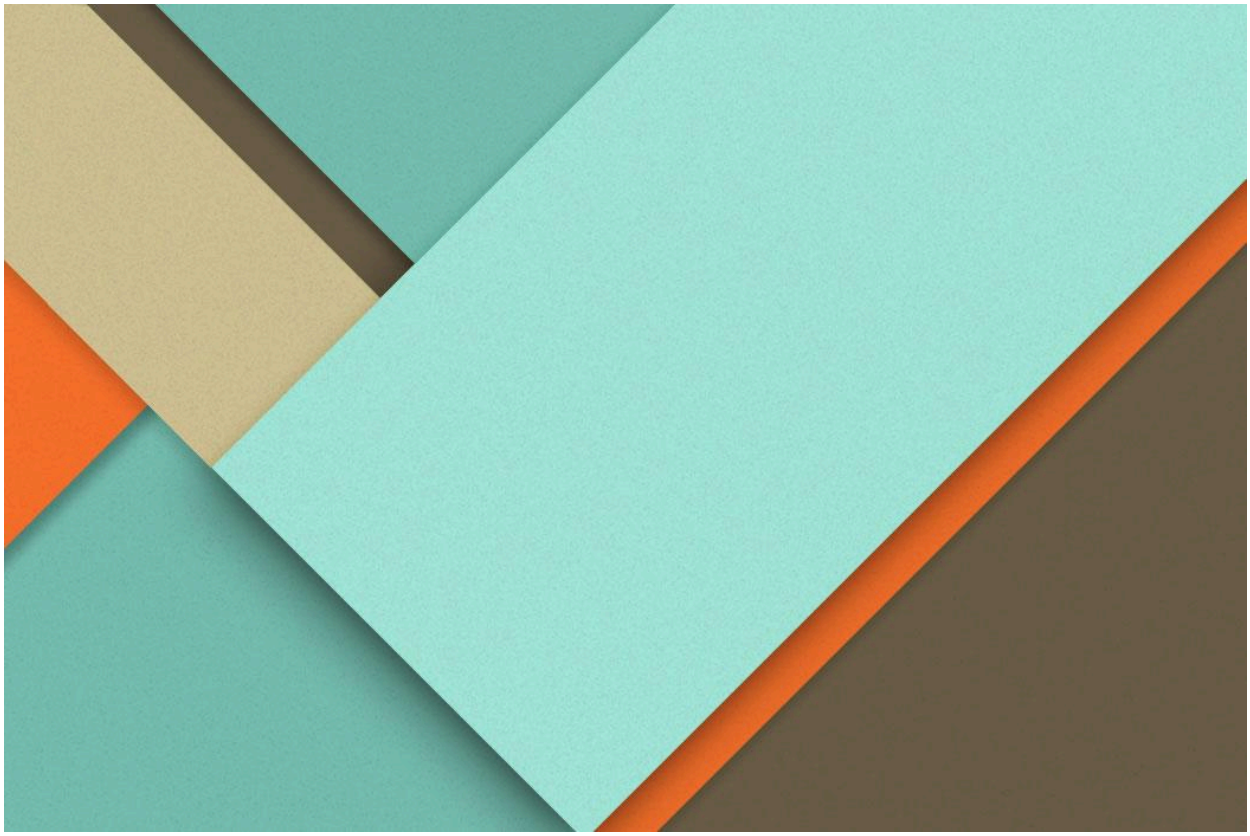

FRS (Face Recognition System)

Senior Design I

Project Proposal

Group Members

- Kai Chun Goh
- Khang Huynh Bao Duong
- Yu Qing Leong
- Wei Jin Gnoh

Introduction

We are planning to work on a face recognition system for our senior design project. This software product aims to identify and recognize individuals, particularly students, based on specific facial characteristics such as eyes and mouth. The primary users targeted are colleges and universities. The general architecture of our software product comprises five key components: data collection, image processing, face detection, face recognition, and database management.

Group Information

Kai Chun Goh

- *Experience*
  - Worked on a couple of side projects on his own.
- *Tech Strength*
  - Skilled in the C++ language.
- *Tech That He Would Like To Learn*
  - Mainly programming languages that relate to the frontend.

Khang Huynh Bao Duong

- *Experience*
  - Worked on a couple of side projects on his own.
  - Working at NetApp
- *Tech Strength*
  - Skilled in the C++, Python, HTML, CSS, JS, SQL language.
- *Tech That He Would Like To Learn*
  - Mainly programming languages that relate to AI.

Wei Jin Gnoh

- *Experience*
  - Worked on a couple of side projects on his own.
- *Tech Strength*
  - Skilled in the C++ language and the Python language.
- *Tech That He Would Like To Learn*
  - Mainly programming languages that relate to AI

Yu Qing Leong

- *Experience*
  - Working as a Software Tester in NetApp
- *Tech Strength*

    - Skilled in the C, HTML, Python
    - Familiar with MacOS, Windows and Linux
- *Tech That She Would Like To Learn*
    - Learn some programming language that is related to backend

Competitors

- FaceFirst, Inc.
- Intellivision
- Kairos

Product Plan

1. Face Detection
2. Capturing Face Images
3. Models Training and Evaluation
4. GUI
5. Adding additional features

Project Phase Plan

Senior Design 1

Phase 1: Face Detection

Phase 2: Capturing Face Images

Phase 3 (Summer break) : Models Training and Evaluation

Senior Design 2

Phase 1: Continue on Models Training and Evaluation

Phase 2: Models Training and Evaluation

Technology Stack

We are planning to use OpenCV, NumPy, OS and the Pillow library within the Python language.

Things To Do

1. Meeting remotely and working on Model Training and Evaluation during the summer break.
2. Working on all the expected functionality / features of our software product.

Rescue Plan

1. To prevent procrastination, make a timeline/timesheet and enforce everyone to done our work on time
2. Make sure everyone meet work requirement
3. Communicates with groupmates frequently and meets in-person more often.

Group Work

Divide work and perform pair-programming. Use Iteration-and-Incremental model. Two group members work on the front-end & the other two group members work on the back end.

Mentors

We are planning to find Professor Kaushik Sinha to mentor our project, he is a college professor who specializes in Artificial Intelligence related projects.

User Experience

We will be asking our family members and friends to test our software products, as well as our classmates.

E-Portfolio

On Github:

1. Steps to install all the libraries or data needed (with specified version)
2. Instruction how to use it
3. Description about the project
4. Images and videos
5. Group members
6. References

LinkedIn and/or Resume:

1. Project Description
2. Skills learnt from the project