

Khoi Nguyen

itkhoi.github.io/thekhoinguyen | Irvine, CA | thekhoinguyenn@gmail.com | (669)770-5419

Education

September 2017 - June 2021

University of California, Irvine: **Bachelor of Science in Computer Engineering** Cumulative GPA: 3.254

Relevant Courses Completed:

Engineering Databases and Algorithms, Data Management, Organization of Digital Computers, Advanced C Programming, System Software, Compilers and Interpreters, Processor Hardware/Software Interfaces

Personal Projects

Robotic Hand with Haptic Feedback

- Fabricated robotic hand using **Arduino** and motors controlled by LilyPad Arduino connected to flex sensors
- Designed and 3D printed robotic hand in **SolidWorks** in a tendon styled design to individually move fingers
- Utilized Servo and **SoftwareSerial** libraries in order to control motors and bluetooth connection
- Sensor readings from glove inputted as commands for implementation of rock-paper-scissors

Automatic Irrigation System Simulation

- Mock irrigation system with Arduino device in **Python** to determine when to turn sprinklers on/off
- Performed hourly checks on humidity and temperature using DHT11 device alongside **CIMIS web API**
- Displayed results and sprinkler state on LCD screen using **rPI.GPIO** module to poll and generate interrupts
- Automatically translated data into xls file in order to record total water used vs humidity/temperature

Messenger Application

- Implementation of messenger application based on a **client-server model** utilizing the C **Socket library**
- Ability to store user data such as chat history and login info through use of linked list translated into text file
- Added ASCII implementation of chess as a messaging option between clients
- Created a Graphic User Interface for clients using **widgets** and **OpenGL** including a working friends list

Super Mario for Android

- Sidescroller game of Super Mario including enemies, powerups, and custom blocks rendered in **JFrame**
- Touch screen supported game using **Java** and **Tiles** with object collision being handled in **libGDX**

Photo and Video Filter

- Application with photo and video filter with color saturation, RGB control, edge detection and other filters
- Able to dynamically process images using **dynamic arrays** and **linked lists** to support multiple image sizes

Experience

December 2018 – April 2019

Officer Filipinos Unifying Scientists in an Organized Network, Irvine, CA

Organized and led meetings that provided knowledge about Filipino culture with an emphasis on engineering activities such as designing a carrier for an egg to survive a fall and designing an electric skateboard

Skills

Languages: Python · Java · C · C++ · HTML · CSS · Javascript · mySql · SolidWorks · Matlab · OrCad

Tools: Linux · Windows · Android · Git · Microsoft Suite · Google Suite · Trello · Raspberry Pi · Arduino