

## Education

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### University of Illinois at Chicago (UIC)

Computer Engineering B.S. 3.55 GPA

Chicago, IL

May, 2022

**Coursework:** Data Structures, Algorithms, Neural Networks, Image Analysis

## Experience

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### App Developer

Catholic Charities of the Archdiocese Chicago

April 2017 – Aug 2017

- Programmed and built an iOS application.
- Researched and implemented Swift code using XCode to develop an application.
- Awarded the opportunity to display my application at One Summer Chicago's annual exposition.

### STEM Tutor

Eric Solorio Academy High School

February 2021 – June 2021

- Co-taught groups of 30+ students AP Calculus, AP Physics, and Honors Physics in a 1 hour class session 5 days a week.
- Prepared material-related problems and solutions to support students' learning.
- Tutored groups of students who needed help in their respective class and hosted 5 meetings a week before or after school.

## Projects

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### Spam Filter Program

- Processed text files containing a range of 1,000 to 10,000 spam-like emails to read from or write into.
- Programmed functionality to load, display, and filter a file containing spam-like emails.
- Enhanced the search time to find and check any inputted email address's spam probability via Binary Search and return only non-spam emails.

### Covid-19 Data Analysis

- Programmed an application that analyzed and processed 50+ daily reports containing Covid-19 related data provided by John Hopkins University.
- Designed and manipulated a map in the necessary manner needed to maintain maximum efficiency in terms of run time and memory use.
- Warranted live information regarding Covid-19's total cases, deaths, and recoveries all over the world or in a specified country.
- Provided relating information of 100+ countries affected by Covid-19 and displayed information on the most affected countries at any time.

### DIVVY Hashing Program

- Designed and enhanced a hashmap template to support my own search and insert functions.
- Processed DIVVY bike and station provided information to manipulate and analyze for the user.
- Enhanced runtime through correct and efficient implementation via hashmap design.
- Displayed station capacity, location, and time last updated through station ID or abbreviation input.
- Displayed any trip's start time, bike used, duration, final destination, and gender/birthdate of bike rider if the rider chose to input this parameter.
- Displayed bike usage of any bike through inputted bike ID.
- Calculated and displayed nearby stations through a distance calculation using latitude and longitude given the user provides their respective latitude and longitude coordinates.

### Python Cache Simulator

- Processed a range of MIPS machine code and implemented MIPS functionality through Python.
- Simulated cache functionality through processed MIPS machine code and returned information regarding typical fundamental simple, direct mapping, full associative, and set associative cache behavior.

## Skills

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Python, C++, C, MIPS Assembly, ARM Assembly, Git, Swift, System Verilog, Visual Studio Code