ASTER YUK KIU CHUN

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EDUCATION & COURSEWORK

University of California, Berkeley| Berkeley, CA
Bachelor of Arts in Computer Science, College of Letters and Science — May 2022
Bachelor of Arts in Applied Math, College of Letters and Science — Cumulative GPA: 3.91

Coursework:

- CS 164 – Programming Languages and Compilers
- CS 188 – Introduction to Artificial Intelligence
- CS 161 – Computer Security
- CS 61C – Machine Structures
- CS 61B – Data Structures
- CS 61A – Structure-Interpretation of Computer Programs
- CS 70 – Discrete Mathematics and Probability Theory
- EECS 16B – Designing Information Devices and Devices
- Math 128A – Numerical Analysis
- Math 110 – Linear Algebra
- Math 54 – Linear Algebra and Differential Equations
- Math 53 – Multivariable Calculus

PROJECTS AND PROFESSIONAL EXPERIENCE

- **Online Queueing System**

Languages: JavaScript, CSS, HTML, December 2020
Link: https://calbadqueue.github.io/

  - Web app includes a user and admin page where admins can notify users before removing them from queue.

- **What We Eatin?**

Language: Kotlin, December 2020-present

  - Designed an android app that picks restaurant given some criteria of location and preference.
  - Worked on the front-end of the application, creating the user interface in order to parse the user input correctly.
  - Also worked on the back-end of the application, implementing the API call to Yelp Fusion API and randomizer for selecting restaurants

- **Chocopy Compiler**

Language: Java, jflex, cup, September 2020 - November 2020

  - Designed and implemented a fully functional compiler for the Chocopy language – a subsection of Python.
  - Worked on a team for this project, using Git to maintain different versions of the compiler.

- **Sprinkles Software Engineer Intern**

Language: Kotlin, May 2020 – August 2020

  - Created an android app that uploads videos from the phone to an online database through HTTP PUT request.
  - Authenticated and uploaded videos are shown on main Sprinkles app on iOS.
  - App uses the Apollo GraphQL platform to communicate with online server.
  - Additional features include SMS-confirmation before uploading and creating a new account for new users.

- **End-to-End Encrypted File Sharing System**

Language: Go, July 2020

  - Designed and implemented a version of Dropbox where files are stored securely using cryptography to prevent the online server from tampering with the stored files.
  - The system allows users to store files and to share/revoke files from other users securely.
  - System also detected if malicious changes had been made to the retrieved files.

- **Numc**

Language: C, Python, April 2020

  - Implemented a library that is similar to the library numpy.
  - The implementation included a Python-C interface and the core functions of the library used SIMD, unrolling and OpenMP to speed up the operations provided by the library.
  - Functions included matrix multiplication, addition, subtraction and power.
  - Wrote integration tests in python to test the functionality and speed of the library.

- **Gitlet**

Language: Java, November 2019

  - Designed a smaller, reduced version of the popular control system Git.
  - Included functions such has branch and checkout etc. based on similar functions in Git.
  - Used serialization to store files locally.
  - Wrote integration tests in both Java and Python to test the functionality of the designed system.

LEADERSHIP AND EXTRACURRICULARS

UC Berkeley Golden Bear Tournament | Berkeley, CA
Tournament Director, August 2019 – September 2019

- Helped organize and promote the tournament as part of the team of tournament directors for 400+ people
- Took part in organizing the match draws and times which involved using algorithms to sort participants and determine their skill level to ensure it was a fair tournament.

UC Berkeley| Berkeley, CA
Student Tutor, December 2020 – Present

- Worked as a student tutor in lab section as part of the course staff for university course EE16B.
- Responsibilities involved helping students apply linear algebra concepts to real world problems and checking off students by asking conceptual questions.

SKILLS AND INTERESTS

Technical: Python, Java, Go, Kotlin, C, RISC-V, HTML, CSS, JavaScript SQL, Scheme, Snap!, Data Structures, Algorithms
Language: English (Native Fluency), Mandarin (Native Fluency), Cantonese (Native Fluency), Spanish (IGCSE level Fluency)
Extracurriculars: Classical Music, Violin, Badminton, Soccer, Travelling