

# Alex Ran Chiu

- Phone: 530-220-0588
- Email: archiu@ucdavis.edu
- Davis, CA

*Third-year computer science major with C# and Python working experience, and a passion in areas involving computer modeling, video game programming, and AI.*

## Education

University of California - Davis  
B.S. in Computer Science  
GPA: 4.00  
Fall 2019 - Spring 2023

Relevant Coursework:

- Software Development & Object-Oriented Programming in C++
- Data Structures, Algorithms, & Programming
- Computer Organization & Machine-Dependent Programming
- Algorithm Design and Analysis
- Machine Learning
- Computer Architecture
- Linear Algebra
- Calculus
- Vector Analysis

Taipei American School (TAS)  
GPA: 3.93  
Fall 2015 - Spring 2019

## Certificates / Skills

- Programming experience:
  - Languages: Python, C#, Java, C++
  - GitHub workflow, Unity Game Engine (2D)
- Languages:
  - English (Fluent)
  - Chinese (Native)
  - Japanese (Advanced - passed highest JLPT N1 proficiency exam)
- SAT: 1560 (Reading 760, Math 800)

## Additional Info:

- Dual USA & Taiwan Citizenship
- Hobbies: Reading (Lovecraftian Horror), Basketball, eSports, Video Game Development/Modding
- Current CS tutor at UC Davis

## Work / Leadership Experience

UC Davis, Department of Biomedical Engineering

**Game Developer**, December 2019 - Present

- Designed and implemented the backend system and UI for the game *Space Zoologist* in C# with Agile software development
- Worked in team of 6 programmers and with cross functional departments (art, design, audio) to deliver demos
- Solved a wide variety of problems, including pathfinding, access map, area/edge detection, and time/space optimization
- Implemented a variety of algorithms and techniques, including A\* search, BFS, flood fill, bit masking, and coroutines

Deloitte Taiwan

**Intern**, August 2019

- Part of Infosec project to build systems hardening automation software based on CIS Security Benchmarks and customizable client requirements
- Developed understanding of computer and information security protection in corporations

TAS Computer Science Team

**Co-President**, 2018-2019

**Member**, 2016-2019

- Coached team of 15 members to compete in the American Computer Science League
- Presented academic / personal projects to incoming freshmen to promote interest in computer science
- Coordinated regular team meetings with faculty staff

## Personal Projects (Github: alexc19113800)

Character Recognition

- Used handwriting data from the MNIST database and the Java Neuroph AI package to train a sigmoid perceptron-based neural network that can recognize handwritten letters and numbers

Image Transformation

- Used linear algebra to transform any 4-sided polygon in an image into a rectangle of desired size (Java)