Daniel Liu

danlliu@umich.edu (734) 585 - 4865

Education

University of Michigan - Ann Arbor, MI GPA: **3.9 / 4.0**
Dual Degree in Computer Science (B.S.E) & Chemistry (B.S)

Relevant Coursework

EECS 281 – Data Structures and Algorithms
EECS 370 – Introduction to Computer Organization
EECS 482 – Introduction to Operating Systems
EECS 376 – Foundations of Computer Science

Personal Projects (full list at https://github.com/danlliu)

Programming Language Design (beep boop, shift, creative writing, this is all made up)

- Designed multiple programming languages based around various ideas and themes from group chats and conversations
- Developed over the course of 1-2 weeks using HTML, Bootstrap, and Javascript

Maze Generation Algorithm (maze-maker)

- Implemented a random maze generation algorithm using the Aldous-Broder algorithm
- The maze is displayed using the HTML canvas and Javascript

Assembly Language Simulator (LC2K01)

- Implemented a simulator for the LEGv8 ISA with Javascript.
- Allows users to examine the contents of memory, registers, and flags during execution.

Turret Wars: macOS SpriteKit application

- Used Swift and the SpriteKit 2D game engine framework to create an arcade-themed shooter game.
- Developed over 1 week, 3000+ lines of Swift code.

Work Experience

University of Michigan College of Engineering Sep. 2020 – present
Instructional Aide for EECS 281 and EECS 370

- Teach weekly discussion sections to review lecture material
- Conducted office hours to give one-on-one help to students with conceptual material and coding projects
- Devised lab assignments and exams to ensure students are keeping up with and learning course material

University of Michigan Comprehensive Studies Program Sep. 2019 – present
Mathematics Tutor

- Tutor Precalculus, Calculus I, Calculus II, and Discrete Mathematics to students from a diverse set of backgrounds

University of Michigan Department of Chemistry Sep. 2019 – present
Student Researcher, Advisor: Dr. Melanie Sanford

- Perform experimental and computational modeling of C–H activation reactions
- Received a fellowship through the Margaret & Herman Sokol Award to perform research over the summer

Skills

Languages: C++, C, Swift, HTML/CSS/Javascript, Bash, Python Software: Git, Xcode, CLion, vim, gdb