

## EDUCATION

### **Michigan State University**

*B.S. Computer Science*

*Dean's List 2015-2019*

*SpartaHack 2018 & 2019 Hackathon Winner*

**GPA 3.8**

*Dec 2019*

- **Relevant Coursework:** Computer Organization and Architecture, Operating Systems, Algorithms and Data Structures, Computer Networks, Algorithm Engineering, Machine Learning, Database Management Systems, Computer Graphics, Advanced Topics in C++

### **Hong Kong University of Science and Technology**

*Exchange Student Program*

**Clear Water Bay, HK**

*Jan 2018 – Jun 2018*

## EXPERIENCE

### **Microsoft – Power BI**

*Software Engineer – Backend in Paginated Reports, a premium offering of the Power BI suite*

**Redmond, WA**

*Feb 2020 – present*

- One of the primary developers in Premium Per User feature, allowing single users, in addition to enterprises, a premium license through efficient scaling in containers.
- Contributed to recreation of the async export API, allowing the download of reports through REST, and patched existing security flaw in the service.
- Assisted team by interviewing candidates, mentoring new team members, contributing in code and design reviews, and developing debugging tools to speed up development of the product.

### **Michigan State University**

*Research Assistant – Evolutionary Computation*

**East Lansing, MI**

*May 2019 – Dec 2019*

- Created genetic algorithms to model and observe transitions and patterns in evolution.
- Represented signaling between organisms within an environment based on different tag-matching metrics and selection schemes.

### **United Airlines**

*Contract Software Engineer - Capstone*

**East Lansing, MI**

*Jan 2019 – May 2019*

- Created United Airline's current website and iOS app for their training and scheduling system used by over 10,000 aircraft technicians, schedulers, and instructors.
- Implemented scheduling, class enrollment, attendance, employee time and calendar tracking.
- Optimized scheduling process by designing algorithm to automatically schedule classes based on room size requirement, instructor travel time, and required resources for a class.

### **Michigan State University**

*Teaching Assistant – Algorithms and Data Structures*

**East Lansing, MI**

*Aug 2018 – May 2019*

- Created challenging projects for class of 80 third-year students that tested them on implementing the algorithms and data structures they had learned.
- Held popularly attended office hours and consulted with students on their coding projects.

## PROJECTS

### **ChiPy8 – Python CHIP-8 Emulator**

*Oct. 2020*

- Emulated a CHIP-8's hardware including memory, CPU, display and registers to allow the playback of software meant for CHIP-8 in Python.
- Recreated and mapped all 34 CPU instructions from the original hardware.
- Created a debugger within the emulator to control execution and view the current state of the emulator.

### **Flappy Darwin – Evolving Flappy Bird through Natural Selection**

*Dec. 2019*

- Used evolutionary computation to evolve a perfect program in the game, *Flappy Bird*.
- Created an assembly-like interpreted language to represent and test each bird in the population.
- Evolved the best program through lexicase selection and different mutations.

### **IQueue - Collaborative Playlist through Song Voting (SpartaHack 2019 Hackathon First Place)**

*Jan. 2019*

- Created an IOS app that connects to a host's Spotify playlist and allows anyone with the app to vote on the next song to be played.
- Developed Python script that used Spotify API hosted by Google Cloud and IOS App that communicated to Firebase for retrieval of data and voting.

## SKILLS & INTERESTS

- **Skills:** C++, Python, C#, Assembly, Swift, SQL, Git, Linux, OpenGL, Qt, Emulation, Distributed Systems
- **Interests:** Tutoring, Fitness, Nutrition, Biking, Graphics, Automation, Art, Bouldering, Emulation