

Alan Chow

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EDUCATION

The Ohio State University

Columbus, OH

Bachelor of Science in Computer Science

Minor in Mathematics

May 2024

- **Cumulative GPA:** 4.00/4.00
- **Relevant Coursework:** Data Structures, Algorithms, Introduction to Databases, Operating Systems, Web Applications, Networking, Computer Architecture, Discrete Math, Linear Algebra
- **Awards:** Mechanical Engineering Top Academic Achievement Scholarship, Honors Engineering Team Research Scholarship
- **Positions:** Corporate Sponsorship Chair for Engineers Without Borders

TECHNICAL SKILLS AND CERTIFICATIONS

- **Languages:** Java, Python, C, JavaScript, SQL, Ruby, Golang, x86, HTML, CSS
- **Tools:** Github, Git, Node.js, Ruby on Rails, React.js, Express.js, Docker, Pandas, NumPy, Three.js, Blender

WORK EXPERIENCE

Tesla

Palo Alto, CA

Full Stack Software Engineering Intern

August 2023 – December 2023

- Working on a team that owns services in charge of every remote interaction with customer vehicles (remote controls, remote diagnostics, vehicle telemetry, APIs for mobile apps, etc.).
- Building web services and creating end-to-end APIs through CI/CD practices with technologies like Ruby on Rails, Golang, React.js, MySQL, etc.

Texas Instruments

Lehi, UT

Software Engineering Intern

May 2023 – August 2023

- Modernized and designed web application UIs with React.js.
- Performed an essential database migration off a legacy database for a web application that managed tool recovery processes.
- Developed Unit Test suites to validate and guarantee data accuracy and integrity post-migration.

Toyota

Ann Arbor, MI

Software Engineering Intern

May 2022 – August 2022

- Developed a python Map Query tool to filter and find geographic map features to perform testing evaluations.
- Reduced query time on 40 KM map searches by ~95%.
- Integrated Open Street Map API to efficiently use geographic nodes in Open Street Map.
- Designed and implemented an SQL database to store and process trial data for Automated Parallel Park tests.

The Ohio State University

Columbus, OH

Software I and II Teaching Assistant

August 2021 - May 2022

- Managed class of 40 students and created projects requirements for 12 different projects.
- Held office hours for students to answer review and general questions, provide feedback on specific code logic.
- Provided evaluation and feedback on assignments.

PROJECTS

Learning Management Full-Stack Application | *Ruby on Rails, JavaScript, HTML, CSS*

November 2022

- Built a mock learning management application for instructors to grade students with peer evaluation systems.
- Developed a REST API to store data from learning management system.
- Designed database model to hold class information for students and instructors.
- Implemented authentication and authorization methods for instructors and students to login securely and to protect sensitive data.

NeuralNetBugs – Evolution Simulator | *Python*

December 2022

- Created a simulation of a species of bugs evolving behaviors through a genetic algorithm.
- Designed bugs with independent neural network brains from scratch to independently make decisions based on sensory inputs.
- Demonstrated successful evolution of AI behavior through natural selection and asexual reproduction with genetic mutation.

Multithreaded Deadlock Avoidance Simulation | *Python*

November 2022

- Implemented a multi-threaded simulation of an Operating System/System manager managing resources and processes needing resources and submitting resource requests to complete.
- Implemented Deadlock Avoidance algorithms that ensure resource system is kept in safe state when resources are allocated.
- Implemented a message-passing system between threads to make requests to the ResourceAllocator and allocation responses to the ResourceUsers while protecting critical sections.