

Michael Tan

Philadelphia, PA

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Portfolio: <https://monadobarrage.github.io/Portfolio/>

EDUCATION

- **Ohio University** Athens, OH | Aug 2022 – May 2026
 - Bachelor of Sciences in Computer Science (B.S.C.S.) | GPA: 3.75
 - Minor: Mathematics
 - Certificate: GIS (Geographic Information Systems)

WORK EXPERIENCE

- **Skycop Inc: AWS Full Stack Programmer** Remote | May 2025 – Present
 - Collaborated on the development of a database and web portal using AWS for processing license plate reads, ensuring accurate, real-time data analysis and tracking on a per-client
 - Rebuilt database infrastructure in AWS DynamoDB and optimized applications running on AWS EC2 servers, boosting system efficiency and scalability
 - Reworked a React webpage dashboard for better integration with AWS databases and monitoring
 - System now handles 100,000+ license plate reads per day, delivering timely data to client dashboards
- **Ohio University: Software Programming Intern** Athens, OH | Oct 2023 - Aug 2025
 - Collaborated with a multi-discipline engineering team sponsored by the United States Federal Aviation Administration to brainstorm creative solutions to develop an automatic robot that can scan foreign or unauthorized items/people on airport runways to ensure continual safety and operation of airports using this system
 - Applies point-set registration solutions such as Feature Metric Registration and Iterative Closest Point to match 3D point clouds with translational and rotational errors/differences, allowing team to focus on matching 2D and 3D airport runway image data as gathered by LiDAR systems
- **OU Housing and Residence Life: Residential Advisor** Athens, OH | Aug 2023 - May 2024
 - Bolstered relations with over 300 residents in presiding Ohio University dorm by hosting dorm-wide events and listening to the thoughts and needs of residents, dramatically reducing problems in the floor and creating an atmosphere of respect and happiness among residents
 - Ensured well-being and security of residents through community meetings and fair enforcement of rules
 - Expanded social skills and interactions through talks and conversations with residents

PROJECTS

- **Arcade Stick Controller Construction** Philadelphia, PA | Jul 2024
 - Built a working arcade controller using a Raspberry Pi and arcade buttons to develop basic electrical engineering skills in a practical setting
 - Extensively managed wires, crimped connectors, and tested wire conduction to ensure clean signals and proper connections between input devices and the Raspberry Pi
 - Applied open source software called RP2040 to program the Raspberry Pi to translate inputs into programmable actions for use in arcade-style games
- **Blossomhack Website: Web Programmer** Athens, OH | Oct 2022 - Present

- Implements and restructures key features such as multi-page functionality for the Sponsor section and restructuring of the Sponsor section that is able to display sponsor logos and images in order to create an intuitive and organized user experience
- Discusses with key organization members to plan out new features and functionalities for website
- **Bobcat Tabletop Discord App: Software Programmer** Athens, OH | Oct 2022 - May 2024
 - Develops several key modules in C# to create a Discord bot that keeps tracks of people's raffles based on the amount of points they receive from playing board games for use in 12-hour board game events
 - Communicates with several lead programmers and mathematical analysts to design the points systems based off of mathematical formulas and functions
 - Deployed online on January 27, 2023 with excellent feedback from Bobcat Tabletop
- **RustGoogleTUI: Software Programmer** Athens, OH | Jan 2023 - May 2023
 - Constructed a Terminal User Interface that provides quick access to user's Gmail and Calendar functionalities through thorough reading of Google Calendar/Gmail documentation
 - Implemented Calendar functions that find and add events to user's Google Calendar by using Google Calendar API
 - Handled and organized Github repository to improve work efficiency of programming team

LEADERSHIP ACTIVITIES AND PROGRAMS

- **OU Software Development Club: Secretary/Trasurer** Athens, OH | Jan 2023 - Present
 - Liaises with CSEL (Ohio University's student organization center) to secure funding for new projects
 - Manages and maintains a Discord server to organize various projects hosted by the organization, such as Arduino coding for plant observations and website creation for a jewelry business
 - Implements Github functionality for easier communication among team programmers
 - Communicates with cabinet to produce exciting and new events for members such as discussions on technology-based accessibility products and demonstrations on AI graduate work
 - Sustained weekly active membership of 20+ members through consistent engagement and programming
- **Blossomhack: Software Programmer and Team Collaborator** Athens, OH | May 2023 - Present
 - Cooperates with several presidents from academic engineering clubs such as IEEE, NSBE, and ACM to deliberate on topics such as financial planning for events and sponsor outreach
 - Separates and assigns various tasks and responsibilities to ensure optimal and time-efficient work output throughout the various academic clubs and their members
- **Games Entertainment and Collaboration: Assistant Manager** Athens, OH | Jan 2023 - Jan 2024
 - Coordinates with various recreational clubs and organizations such as Bobcat Tabletop and Bobcat Blasters (Nerf club) in organizing 12-hour events by creating short-term and long-term goals that are delegated to each club according to their strengths
 - Prepares 12-hour events through room set-up and monitoring of crowd engagement in events

COMMUNITY SERVICE

- **Tetons Science School: Trail Restoration Team Member** Jackson, WY | Aug 2024
- **Extra Life: Team Member** Athens, OH | Aug 2022 - Present

TECHNICAL SKILLS

AWS, Redis/Valkey, DynamoDB, Systemd Services, Point Cloud Solutions, React, Typescript/HTML/CSS, Linux, Docker, Server Hosting, Java, C++, C#, Python, Android Rooting, Computer/Phone Repair, ArcGIS Pro, Raster and Vector Data Management, Rust