Michael Tu

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EDUCATION

University of Florida — Gainesville, FL
B.S in Computer Science; GPA: 3.95/4.00 — *Aug 2021 – May 2025*
- **Relevant Coursework**: Data Structures and Algorithms, Software Engineering, Linear Algebra, Discrete Mathematics, Statistics, Object-Oriented Programming, Computer Organization, Multimodal Machine Learning

EXPERIENCE

Lockheed Martin — Dallas, TX
Software Engineering Intern – Active Secret Security Clearance — *June 2023 – Aug 2023*
- Worked on an agile team to develop embedded software, collaborating using Jira and Confluence.
- Wrote Ada code for PrSM Increment 1 missile guidance software and integrated it into a CI/CD pipeline.
- Performed HWIL simulation runs and interpreted Wireshark and telemetry data, resolving 3 issues.
- Streamlined test documentation procedure using LaTeX and Git to allow for simultaneous access of documents and reducing file size by 23%.

University of Florida — Gainesville, FL
Teaching Assistant: COP3502C – Programming Fundamentals I — *Aug 2022 – Present*
- Conducted office hours and gave weekly lectures to 30 students enrolled in Python programming course.
- Aided instructor in grading and providing feedback on coursework including 2 exams, 9 labs, and 4 projects.
- Helped develop course content, including programming projects, instructional materials, and study guides.

PROJECTS

City.io — *Jan 2023 – May 2023*
- Developed an online city-building game written in Go and TypeScript using the Angular framework.
- Designed user interface for login and game components. Ensured functionality of front-end components writing 18 Cypress End-to-End tests.
- Collaborated with teammates using Git, assigned issues, and planned 6 sprints to ensure timely delivery of updates.

Deep Guitar — *March 2023 – May 2023*
- Created a mulitmodal machine learning model, combining 2 modalities to identify guitar chords.
- Tracked hand positions using Mediapipe framework and extracted audio features using Librosa library.
- Utilized late fusion to combine video and audio classifiers, producing a model with 36% improved performance.

WordHunt Solver — *Oct 2022*
- Wrote a C++ app to solve word puzzle game WordHunt, finding all solutions in 0.02 seconds.
- Implemented a backtracking algorithm to find words hidden in a 2D character array. Used a Trie data structure to store dictionary and validate candidate words, reducing calculation time by 86%.

INVOLVEMENT

Filipino Student Association (FSA) — Gainesville, FL
Multimedia Chair — *June 2022 – April 2023*
- Produced videos promoting Filipino culture, dance, and on-campus activities using Adobe After Effects.
- Collaborated with fellow board members to plan and organize social events for 300+ students.
- Aided in running first-year involvement program, held meetings to guide 15 students through the process of producing communicative media.

SKILLS

- **Languages**: (Proficient) C++, Python, Java, JavaScript/TypeScript, HTML/CSS, MATLAB, LaTeX (Familiar) SQL, R, ARM Assembly, Ada
- **Tools**: Git, Jira, Cypress, Jupyter Notebook

AWARDS

- **University of Florida Dean's List**: College of Liberal Arts and Sciences (Fall 2021 - Spring 2023)
- **Benacquisto Scholarship**: Full ride scholarship awarded to National Merit Scholars