

Madeleine Tan

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EDUCATION

B.S. Computer Science

Graduation: May 2025

Arizona State University, Tempe, AZ

3.62 GPA

Relevant Coursework: Computer Org/Assembly Language Programming (MIPS, C, x64), Data Structures and Algorithms (C++), Principles of Programming (Java), Foundations of Machine Learning (Python for Univariate and Multivariate analysis), Intro to Human-Computer Interaction, Capstone

TECHNICAL SKILLS

Programming Languages: Java, JavaFX, JavaScript, C, C++, C#, Scheme, MatLab, Assembly (MIPS, x64), Python, SQL, NoSQL

Software Development: CSS, HTML, Django framework, exposure to React framework, JUnit Testing, Firebase (Cloud Firestore), Git, GitHub, Eclipse, Visual Studio Code, Visual Studio, IntelliJ, exposure to Linux

Design and Modeling Tools: Microsoft Office, Brick Link, Tableau, Power BI, Figma, Google Colab

PERSONAL PROJECTS

Founder of Journi Transportation

Spring 2025

- Founded *Journi Transportation*, a project aimed at enhancing public transit usability for international travelers.
- Designing a mobile app that offers step-by-step transit directions, fare payment guidance, and a real-time currency converter. Interviewed over 15 potential customers.

LEADERSHIP / EXTRACURRICULAR EXPERIENCE

SASE Webmaster Committee Member and Developer

Fall 2024 - 2025

- Collaborating with a four-student web team to build and maintain SASE ASU's website using Django, JavaScript, HTML, and CSS. Enhancing UI/UX and streamlining backend database operations for 130 students.

SASE (Society of Asian Scientists and Engineers Member; Dance Rehearsal Guide)

Spring 2023 – 2025

- Co-led choreography sessions for 8-15 dancers and served as a liaison for scheduling and performance coordination.

ACADEMIC PROJECTS

Capstone Project: Developing AI Chatbot with Beam Group

Fall 2024 – Spring 2025

- Building an AI-powered chatbot to assist Toronto seniors with federal financial aid applications using Gemini API, Firebase (Cloud Firestore), React, and Next.js.
- Responsible for database management and frontend development in a five-person student team. Project sponsored by Beam Group, a public policy and service innovation company.

EffortLogger V2: Software Engineering Project

Fall 2023

- Created a Java/JavaFX application for engineers to log work time, plan tasks via Planning Poker, and manage user settings and visibility preferences. Contributed to frontend development for settings and Planning Poker, and backend development for user authentication.
- Applied Agile/Scrum practices and produced UML, sequence, and class diagrams; implemented JUnit tests.

Research Paper about Women in STEM

Spring 2022

- Wrote a class paper about the challenges women in STEM such as discrimination, self-doubt, and why STEM education accessibility is important to younger girls. Interviewed five women in the STEM industry: ASU professor Tadayon-Navabi, a friend in aerospace, a mother studying at ASU, an author from Statistics Canada, and a researcher from the SETI Institute.

ACTIVITIES

Business Analytics with Excel: Elementary to Advanced

Summer 2023

- Enrolled in three-week Coursera class provided by Johns Hopkins University. Calculated and evaluated data using What-If Analysis, and Linear Programming. Learned the importance of net present value, modeling uncertain demand, and ROI

Devil's Invent: DASSH Hackathon

Spring 2023

- Worked with a team of five to research and pitch counter-drone solutions for potential national security threats at a DHS-sponsored hackathon.

Lyft Hackathon

Spring 2022

- Team of three recognized as a "top-finisher" in an 8-hour hackathon hosted by Lyft. Implemented potential solutions for Lyft's problems using data structures and algorithms.

OTHER

New American University Award Scholarship

2021-2025

Dean's List

Fall 2021; Spring 2022; Spring 2023; Fall 2024