Alan Tai

908-798-2553 | talan4030@gmail.com | alanwtai.com | LinkedIn | GitHub |

EDUCATION

Northeastern University **Aug. 2024 – May 2028**
Bachelor of Science in Computer Science, Minor in Economics ***Boston, MA — GPA: 3.926/4.0***
Relevant Coursework: Object Oriented Design, Algorithms & Data Structures, Intro to Databases, Foundations of Cybersecurity, Intro to Mathematical Reasoning, Discrete Structures, Foundations of Data Science, Physics 1 & 2, Calculus 1 & 2

TECHNICAL SKILLS

Languages: Java, Python, Lisp, JavaScript, Swift, HTML/CSS, LaTeX
Technologies: React, NextJS, Node, Tailwind CSS, PostgreSQL, VisionKit, AVFoundation, MediaPipe, SwiftUI, Racket
Software: Figma, Git, VS Code, Office 365, XCode

EXPERIENCE

Web Developer Jul. 2025 – Present
FirstByte *Boston, MA*
- Built a full-stack program management system using Next.js, Prisma, and Supabase, featuring user authentication (SSO with NEU accounts), program content storage (workshops, tasks, files), and attendance tracking.
- Improved website functionality and user experience by debugging issues with animations and UI components.
- Managed and updated website content, including the executive board section, ensuring a polished presentation.

PROJECTS

StudyBuddies | *React, Node.js, PostgreSQL, Socket.IO, OpenAI* Jul. 2025 – Present
- Developed a full-stack web application that allows Northeastern students to instantly find and connect with classmates by enrolling in courses based on their specific CRNs.
- Engineered a secure REST API with Node.js, implementing JWT for authentication and using the Prisma ORM to manage a PostgreSQL database, while integrating Socket.IO for live user presence and messages.
- Provided a seamless experience for the user with an AI-powered feature that scans their schedule screenshot, which automatically adds new courses to the database, and enrolls the user.

Calendar App | *Java, Java Swing, JUnit* May 2025 – June 2025
- Architected and led the development of a multi-modal calendar application in Java from concept to completion.
- Implemented a robust backend using the MVC design pattern and developed both a Java Swing GUI and a text-based command-line interface.
- Finished a versatile scheduling solution capable of running with a full GUI, in an interactive text-mode, or in a headless mode for automated scripting.

PostureMaxx | *Swift, iOS, VisionKit, AVFoundation* Mar. 29-30, 2025
- Spearheaded a team-driven effort to develop a real-time posture monitoring iOS app that helps users prevent chronic pain by detecting and alerting them to poor posture.
- Utilized a real-time pose detection algorithm using Apple's Vision and AVFoundation frameworks to compute shoulder-to-neck angles. Implemented temporal smoothing by averaging landmark positions over a rolling window to reduce jitter and improve tracking stability.
- Created a high-impact health tool within 12 hours that **won an award at VITAL's Hackathon**, demonstrating successful implementation of complex on-device machine learning.

NUGuessr | *TypeScript, React, Node.js* Feb. 7–9, 2025
- Led a team to build an interactive, GeoGuessr-inspired game tailored to help new and transfer students gamify their learning of the Northeastern campus layout.
- Constructed using React and Node.js, used Git for version control across frontend, backend, and UX design.
- Delivered a polished and functional application within 48 hours and won the **Best Beginner Award** at the HackBeanpot Hackathon for its creative solution to a common student problem.

INTERESTS

Lifting, Rubix Cube, Rock Climbing, Restaurants, Disney World, Chess, Playing Video Games (Valorant, Minecraft), Hiking, Running