Alan Tai

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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, Foundations of Cybersecurity, Intro to Mathematical Reasoning, Discrete Structures, Intro to Macroeconomics, Intro to Microeconomics, Physics 1 & 2, Calculus 1 & 2

TECHNICAL SKILLS

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

EXPERIENCE

Software Developer   Sep. 2024 – Dec. 2024
Oasis   *Boston, MA*
- Collaborated with a team to create a website for Northeastern beginner lifters using React and implemented data-driven workout generation.
- Designed the website's user interface in Figma, focusing on intuitive navigation and improving user experience through A/B testing.

PROJECTS

Calendar App | *Java, Java Swing, JUnit, LaTeX*   May 2025 – June 2025
- Architected and led the development of a multi-modal desktop 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.
- Delivered a versatile scheduling solution capable of running with a full GUI, in an interactive text-mode, or in a headless mode for automated scripting.

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.
- Built 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.

ADHDList | *Swift, iOS*   Jan. 2025 – May. 2025
- Designed and developed a productivity application for iOS created to assist individuals with ADHD in improving their organization and focus.
- Independently handled initial UI/UX design. To motivate users, features like customizable reminders and gamification elements, such as rewarding consistent task completion with streaks, were implemented.
- Tailored a solution to help users with ADHD manage their tasks more effectively, encouraging consistent use through positive reinforcement.

PostureMaxx | *Swift, iOS, VisionKit, AVFoundation*   Mar 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.
- Developed 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.

INTERESTS

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