Alexander Chin

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Education

University of Washington: Robinson Center Early Entrance Scholar *Sept 2023 - June 2027*
BS student in Computer Science, Minor in Mathematics and Philosophy

- **GPA:** 3.9/4.0
- **Relevant Coursework:** Machine Learning, Deep Learning, Computer Vision, Data Visualization, Data Structures and Algorithms, Software Design and Implementation, Low-level Programming and Hardware-Software Interface, Linear Algebra, Probability and Statistics, Discrete Mathematics, Multivariate Calculus

Selected Technical Skills

Languages: Python, Java, JavaScript, TypeScript, HTML, CSS, SQL, C

Technologies: Node.js, React.js, React Native, Next.js, SQLite, JUnit, Excel, Conda, PyAutoGUI, TKinter, Node/NVM, Bash/ZSH, Express, Qiskit, Pandas, Selenium, NumPy, Pandas, Matplotlib, PyTorch, Jupyter, AWS

Experience

Computer Science Teaching Assistant (CSE 122, 143, 490) *Dec 2023 – Feb 2025*
Allen School

- As TA for CSE 122: Introductory Object Oriented Programming, taught introductory data structures and algorithms. At the age of 16, became the youngest person ever to teach the intro sequence.
- Chosen to be the head TA for CSE 143X, an accelerated version of the introductory sequence, and CSE 490: Big Ideas in AI, an upper-division AI class.
- Led **weekly classes**, held office hours, and gave indivdualized student help in the **Intro Programming Lab.**

Software Engineer Intern *June 2023 – Sept 2023*
Synthesis

- Designed an interactive, adaptable digital tutor to teach mathematics via **immersive simulations**.
- Developed the web interface for **Synthesis Tutor** and programmed multiple math simulations focusing on multiplication using **React** and **Next.js**.
- Iterated rapidly on UI, refining it through **5+ rounds of real customer testing**, and pushed new content to **1,000+ students**.
- Led stand-ups, collaborated with education professionals and developers, and evolved the tutor from prototype to a fully functional product, now boasting a **4.7-star rating** with 3,000+ reviews on the App Store.

Software Engineer *Jan 2024 – Apr 2024*
Amethyst

- Engineered an LLM-integrated Chrome extension as part of a small startup team, leveraging advanced **natural language processing** capabilities to automatically generate spaced-repetition flashcards on internet information.
- Developed the front-end using React and Chrome Storage API, while building a robust backend with **Supabase and PostgreSQL** to handle data storage and authentication seamlessly.
- Conducted user research and studies, iterating on product features, leading to a **profitable service** with measurable user growth.

Projects

Spaced Repetition and Memory Retention in Language Models *2025*

- Research project in exploring data efficiency through forgetting-informed scheduling; designed novel ways to fine-tune LMs with static limited data, displaying marked improvements in accuracy by using spaced-repetition inspired scheduling methods.

Face-Value *2024*

- Engineered a personalized face rating and generation system in PyTorch using a dual VAE and feed-forward architecture to analyze latent traits and predict individual preferences (like Instagram or Tinder).

Quantum ML Research *2022*

- Developed a neural quantum classifier advised by PSU professor Marek Perkowski, achieving **93% accuracy in diagnosing COVID-19** in a Nature dataset; won second place in Nabila Maazouz science fair.