Caleb Hu

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Education

University of Washington Expected Jun. 2027

Bachelor of Science in Computer Science; GPA: 3.84/4.00 *Seattle, WA*

- Relevant Coursework: System and Software Tools, Data Structures and Parallelism, Hardware and Software Interface, Discrete Mathematics, Linear Algebra, Statistics and Probability

Experience

Software Engineer Intern Jul. 2025 – present

Mastertech.ai, a VC-backed startup reshaping auto-repair *Kirkland, WA*

- Built end-to-end prompt template feature to retrieve and store vehicle recall data using Redux/Typescript and NHTSA/RESTful API; implemented an auto-generated history log to display recalls and recommendations.
- Designed and engineered LLM benchmarking software, developing X test cases for current model performance.

Research Assistant - Computer Vision, AR/VR Jun. 2025 – present

Makeability Lab *Seattle, WA*

- Collaborating with Prof. Jon Froelich, PhD student Jaewook Lee, and Google researchers to develop PreviewAR, an image-to-3D tool for e-commerce furniture images; using Unity and Hunyuan 3D-2 for 3D asset generation.

Research Assistant - Natural Language Processing (NLP) Jun. 2024 – Oct. 2024

University of Washington Medical Center, Kang Oncology Lab *Seattle, WA*

- Under Dr. John Kang, applied 95,000+ National Cancer Institute (NCI) research abstracts to Python language model BERT to analyze NCI funding trends and granularize research topics within field of radiation oncology.
- Researched 3 programming techniques to implement Term Frequency-inverse Document Frequency (TF-IDF), a Python modeling technique to assist BERT in categorizing word importance by number of occurrences in abstract.

Leadership

Associate Director of External Affairs Mar. 2025 – present

University of Washington Consulting Association (UWCA) *Seattle, WA*

- Led club website revamp, increasing number of unique visits by 176% (over 30 days) by implementing SEO.
- Expanded consulting opportunities for 40+ members by building partnerships with leaders from NVIDIA, Pinterest, and Accenture.

Projects

CodeStepByStep (CSBS) | codestepbystep.com | *TypeScript, MySQL, Java EE* Jul. 2025 – present

- Building GPT-powered teaching assistant chatbot with RAG (Retrieval Augmented Generation) to offer coding practice support for 95,000+ university, high school, and middle school students and instructors nationwide.
- Created a TypeScript frontend countdown timer to improve user experience during submission limits.

Nick Blendz | nick-blendz.com | *Next.js, TypeScript, Supabase, Clerk, AWS* May 2025 – Jul. 2025

- Developed a full-stack web application/portfolio for Nick Blendz, a barber based in Renton with 100+ clients.
- Built automated scheduling feature storing client and event data in Supabase with Drizzle ORM, syncing client calendar using Google Calendar API, and hosting the website on Amazon Elastic Compute Cloud (EC2).
- Created internal client dashboard with customizable availability and event details, using Clerk for authentication.

Yoka Tea | *HTML, CSS, JavaScript, React.js, Firebase* Jan. 2025 – May 2025

- Developed a full-stack web application for Seattle boba shop to digitize brand, boba and merchandise orders.
- Integrated Firebase backend services for user sign-in/authentication, payment processing, and order tracking.

Technical Skills

Languages: Java, Python, JavaScript, TypeScript, HTML/CSS
Frameworks: Next.js, React.js, Tailwind CSS, Flask, JUnit, Java Swing
Developer Tools: Git, Jupyter Notebook, Google CoLab, VS Code, PyCharm, Eclipse, Supabase
Libraries: pandas, sklearn, NumPy, Matplotlib, Firebase, Clerk, Drizzle ORM
Currently Learning: Docker, AWS Lambda, Stripe.js, Spring Boot