

Ethan Bai

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ABOUT

I am an undergraduate seeking internships and full-time roles in software development. I focus on delivering quality products that satisfy customer needs, whether it be building full-stack applications or managing the largest self-serve storefront at UW. I'm passionate about innovating, teaching, and learning new skills.

WORK EXPERIENCE

Software Development Engineer Intern

June 2024 – August 2024

Amazon

- Designed a graphical database in AWS Neptune to handle live data from over 4 million users and identify complex relationships between events to pinpoint abusive accounts
- Built cloud infrastructure and data pipelines to support over 3.1 million requests daily of on demand data transfer from AWS S3 to AWS Neptune using AWS Lambda
- Optimized AWS resources for server load and scalability to reduce running costs by 90%

Databases Teaching Assistant

March 2024 – June 2024

University of Washington

- Taught database design, implementation, and querying using SQL, relational algebra, and NoSQL systems
- Conducted review sessions for topics such as query optimization, indexing, and transactions for over 140 students

Software Engineering Intern

September 2023 – November 2023

Centific

- Developed and deployed a machine learning model for Outlook using Nimbus ML to filter out emails containing offensive language to reduce user exposure to harassment and harmful content with 99% accuracy
- Designed a sentiment analysis model that classified messages as positive or negative with 83% accuracy

EDUCATION

University of Washington

Seattle, WA

Bachelor of Science in Computer Science - GPA: 3.95

Sep. 2022 – June 2026

- Courses: Software Design and Implementation, Data Structures and Parallelism, Databases, Hardware and Software Interface, Machine Learning, Systems Programming, Discrete Mathematics, Algorithms, Operating Systems, Technical Writing, AI Product Management, Networks, Computer Security
- Organizations: Computing Community (Snack Overflow Director), Husky Coding Project, Interactive Intelligence, Husky Badminton Team

TECHNICAL SKILLS

Languages: Java | Python | TypeScript | SQL | C | C++

Frameworks: AWS | React | Node.js | Flask | TensorFlow | ML.NET

Developer Tools: Git | Linux | IntelliJ | Visual Studio Code | DeepNote | Jupyter Notebook | Google Colab | AWS CDK

Certifications: Advanced Learning Algorithms | Unsupervised Learning, Recommenders, Reinforcement Learning | Supervised Machine Learning: Regression and Classification

Awards: Eagle Scout, National Merit Scholar, Presidential Volunteer Service Award, Magna Cum Laude

PROJECTS

xk Operating System | C, C++, Gitlab

March 2024 – June 2024

- Designed system calls for file handling, process management, and inter-process communication in a basic operating system kernel
- Implemented multi-threading and synchronization primitives to support concurrent processes and manage shared resources while preventing memory leaks

UW Campus Map | Java, React, TypeScript

January 2023 – March 2023

- Developed a full stack web application that allows users to find the shortest walk-able path from one building to another on campus and receive directional instructions
- Constructed the GUI with Typescript and React to provide for a cleaner user interface and optimized the back-end application to efficiently choose the best path through thousands of options