

# Elizabeth Ho

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## EDUCATION

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### Virginia Polytechnic Institute and State University

Expected Dec. 2027

*Bachelor of Science in Computer Science, Minor in Human-Computer Interaction*

*Blacksburg, Virginia*

- **Cumulative GPA:** 3.65 / 4.00
- **Relevant Coursework:** Data Structures & Algorithms, Computer Organization I & II, Intermediate Software Design, Human-Computer Interaction

## EXPERIENCE

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### Amazon Web Services (AWS)

May 2025 – Aug. 2025

*Software Engineering Intern*

*Seattle, WA*

- Developed a serverless automation pipeline using **AWS Lambda, S3, Athena**, and **Step Functions** to automate certificate backfills from two databases using **SQL-based queries** and **parallel processing**.
- Reduced certificate update time by **99.86%**, saving **1 developer-month** per newly launched region.
- Delivered technical presentations to cross-functional teams, culminating in an organization-wide presentation to **100+ engineers** across **AWS Cryptography**.
- Discovered and permanently resolved a **5-year-old** data integrity bug in the organization's production database through the automation's validation logic, improving system reliability by **40%**.

### Virginia Tech

Jan. 2026 – Present

*Teaching Assistant, CS 1114*

*Blacksburg, VA*

- Mentor **50+** students during weekly office hours in introductory **Java** and **object-oriented software design**.
- Assist in weekly lab sessions for **30+** students with code review and hands-on debugging for labs and projects.
- Design **custom test cases** beyond course requirements to surface edge cases and improve debugging efficiency.

### Virginia Tech

Jan. 2026 – Present

*Undergraduate Research Assistant*

*Blacksburg, VA*

- Researching LLM-assisted smart classroom usability evaluation, developing a framework combining pose detection, spatial layout analysis, and AI-generated narratives.
- Build Python image-processing pipelines using **OpenPose** to analyze posture and movement in classroom data.
- Designing LLM prompts to interpret classroom visuals and usability insights, comparing AI to human judgment.

## PROJECTS

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### Clari AI | *Next.js, TypeScript, AWS, OpenAI GPT, NextAuth*

Dec. 2025

- Engineered a serverless full-stack application using Next.js and TypeScript that processes interview audio files up to 2GB (80x capacity increase), with AI-powered transcript analysis and performance evaluation.
- Designed event-driven microservices architecture integrating AWS Lambda, S3, DynamoDB, and Transcribe with **Infrastructure-as-Code** deployment, reducing infrastructure setup time and eliminating manual configuration.
- Implemented Google OAuth authentication, real-time asynchronous processing with intelligent polling mechanisms, and GPT-4o integration delivering structured performance analytics across 5+ evaluation metrics.

### NASA Hack (VT Hacks) | *NASA POWER API, Meteomatics API, Google Gemini AI, Firebase*

Oct. 2025

- Engineered a cross-platform React Native weather application evaluating event favorability across **100+** global locations using NASA POWER and Meteomatics APIs
- Architected RESTful backend with Express.js implementing intelligent routing logic, OpenStreetMap geocoding with coordinate validation, and comprehensive error handling for invalid location inputs.
- Integrated Google Gemini AI with custom prompt engineering to transform raw weather JSON into conversational insights, performing real-time compatibility analysis between user preferences and forecast data

## TECHNICAL SKILLS

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**Programming Languages:** Java, Python, JavaScript, TypeScript, C/C++, SQL, HTML/CSS, LaTeX

**Frameworks:** React, Next.js, React Native, Node.js, Express.js, Tailwind CSS, Angular, FastAPI, Firebase, Vercel,

**APIs & Tools:** REST APIs, OpenAI API, Google Gemini API, AWS, Amazon Polly, Postman, MongoDB, Computer Vision (OpenPose), Chrome Extension Development, Docker, CI/CD, Git, GitHub