

NATHANIEL WETZEL

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EDUCATION

Northeastern University

Boston, MA

Bachelor of Science in Computer Science

Grad Date: May 2027 | GPA: 3.8/4.0

Coursework Algorithms and Data, Object-Oriented Design, Computer Systems, Cloud Computing, Programming with C++, Intro to Computer Vision, Foundations of Cybersecurity

Honors Amazon Future Engineer, Elks Most Valuable Student, Dean's List

EXPERIENCE

Amazon

Jun. 2025 – Sep. 2025

Software Development Engineer Intern

Seattle, WA

- Developed a **Java** service validating **10M+ transactions/month** at Amazon's receivables API endpoint.
- Eliminated invalid custom billing attributes ensuring accuracy at scale across **billions of dollars** in billing.
- Designed a config framework for onboarding new attributes, replacing code deployments with config changes.
- Improved validation performance by **60%** with config retrieval integration and runtime caching of attributes.

Wolters Kluwer

Jan. 2025 – Jun. 2025

Software Engineer Intern

Waltham, MA

- Migrated a clinical NLP dosing app to a **Python** microservice on **AKS**, accelerating clinical feature releases.
- Containerized the service with **Docker**, processing **70MB+** of dosing data and reducing deployment time.
- Orchestrated remediation for **100+ Linux hosts** by developing a patching tool with **Ansible** and **Jenkins**.

Amazon

May 2024 – Aug. 2024

Software Development Engineer Intern

Seattle, WA

- Implemented a **Java** metric aggregation service ensuring timely invoice delivery for **100K+ invoices/month**.
- Engineered an **AWS Lambda** in **Java** to automate **Elasticsearch** metric propagation into **CloudWatch**.
- Deployed an **IaC** module w/ **AWS CDK** to provision services in **VPC**, leveraging **Dagger** for dependencies.

PROJECTS

x64 Compiler

Sep. 2025 – Present

- Building a compiler in **C++** for a custom expression language targeting direct **x86-64** assembly.
- Designing a recursive-descent parser with code generation for variables, arithmetic, and semantic validation.
- Integrating **NASM/GCC/LD** toolchains to assemble and link emitted code into static **ELF** executables.

NDVI Compare

Apr. 2025 – Jun. 2025

- Built a **FastAPI** backend to detect deforestation from satellite imagery using **Google Earth Engine**.
- Processed multi-temporal satellite data, highlighting **hundreds of thousands** of acres of vegetation change.
- Containerized service with **Docker**, enabling async processing, cloud masking, and secure secret handling.

TECHNICAL SKILLS

Languages Java, Python, C/C++, TypeScript/JavaScript, Racket, SQL (Postgres)

Technologies Git, Linux, Docker, Kubernetes, Terraform, Ansible, Jenkins, AWS, Azure, Dagger

Concepts Software Engineering, Backend, Fullstack, Cloud Computing, DevOps, CI/CD Pipelines, NLP, Computer Vision, API Development, Infrastructure as Code (IaC), Research