

Nathan Metens

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SUMMARY

Software engineer graduate experienced in building full-stack web applications, REST APIs, and cryptographic implementations. Graduate teaching assistant with strong foundations in algorithms, data structures, machine learning, and cybersecurity.

EDUCATION AND CERTIFICATES

Portland State University

Sep 2024 – Dec 2025

Master of Science in Computer Science | Portland, OR

- Coursework: Machine Learning, Database Systems, Web & Cloud Systems, Software Engineering

Portland State University

Sep 2024 – Dec 2025

Graduate Certificate in Cybersecurity | Portland, OR

- Coursework: Cryptography, Network Security, System Administration & DevOps

Portland State University

Sep 2019 – Jun 2021

B.S. in Mathematics, Physics Minor | Portland, OR

- Coursework: Advanced Linear/Multilinear Algebra I-II, Partial Differential Equations I-II

SKILLS

Languages: C++, Java, Python, Rust, SQL, Bash, JavaScript

Web: HTML, CSS, Firebase, Vercel, Google Cloud

Tools: Git, Linux, Docker, VirtualBox, Jupyter, MATLAB

Concepts: Data Structures, Algorithms, Cryptography, Machine Learning, Cybersecurity

Other: French (fluent)

TEACHING & TECHNICAL EXPERIENCE

Graduate Teaching Assistant | *Intro to Computer Science in Python (CS 161)*

Sep 2025 – Dec 2025

- Delivered lectures and live coding demonstrations on foundational Python programming concepts.
- Led in-class discussions and group activities reinforcing problem-solving and coding skills.
- Held weekly office hours assisting students with assignments, quizzes, and exam preparation.

Technical Course Support Specialist (TCSS) - Lab Facilitator | *CS 162, CS 163, CS 302*

Sep 2024 – Dec 2025

- Lectured in data structures, algorithms, and foundational computer science topics.
- Led weekly lab sessions guiding students through programming exercises and lab work.
- Conducted live coding demonstrations explaining algorithmic problem-solving techniques in advanced data structures.

Grader | *Joy of Coding: Java & Android (CS 510)*

Sep 2024 – Dec 2024

- Evaluated graduate and undergraduate programming assignments, projects, and exams.
- Provided timely feedback and communicated with students and instructors regarding coursework.

Interim IT Support | *French American International School*

Sep 2021

- Maintained inventory of school technology including tablets, iPads, and Chromebooks.
- Resolved technical support tickets involving projectors, printers, connectivity, and accounts.
- Supported faculty and students in a bilingual French-English environment.

PROJECTS

Rust Quote API (Axum, SQLx, JWT, OpenAPI) | *Full-Stack Rust Web Service*

Apr 2025 – Jun 2025

- Built a REST API in Rust using Axum and SQLx with PostgreSQL integration.
- Implemented JWT authentication and role-based access control.
- Generated OpenAPI documentation with utoipa and built a reactive frontend using Leptos.

Full-Stack E-Commerce Website (JavaScript, Firebase, Vercel) | *Cute Clean Soaps @ cutecleansoaps.com*

Jan 2026 – Present

- Developed and deployed a full-stack e-commerce website using HTML, CSS, and JavaScript on Vercel.
- Integrated Resend API for transactional email workflows and built a Firebase inventory database.
- Configured domain infrastructure, email services, and Google Cloud resources.

Salsa20 Cryptographic Implementation (Python) | *Stream Cipher Analysis*

Oct 2025 – Dec 2025

- Implemented the Salsa20 stream cipher from scratch following the Bernstein specification.
- Developed quarter-round, row-round, column-round, and double-round cryptographic primitives.
- Verified correctness using known test vectors and analyzed ARX cipher design.

Battlecode AI Competition (Java) | *Autonomous Strategy Bot*

Oct 2025 – Dec 2025

- Developed autonomous game agents in Java for the MIT Battlecode programming competition.
- Implemented decision-making and pathfinding algorithms for multi-agent coordination.
- Collaborated in an Agile team using Git, Discord, and weekly Scrum demos.