

Nathan Lannon

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EDUCATION

University of Rhode Island

Spring 2026

B.S. Computer Science, Minor in Mathematics

- Coursework: Algorithms, Data Structures, Operating Systems & Networks, Computer Organization, Machine Learning Security, Linear Algebra, Combinatorics; Honors: Dean's List (Fall 2024, Spring 2025)

EXPERIENCE

Sony Interactive Entertainment - PlayStation

May 2025 - August 2025

Software Engineer Intern - Embedded C, Python

Aliso Viejo, CA

- Extended STM32 firmware to add game-agnostic latency measurement for local vs. cloud benchmarking.
- Built a color library in CIE Lab* space with adaptive signal tuning to minimize sensor latency.
- Implemented an on-device HSV record/replay system for color calibration on resource-constrained hardware.
- Developed a Python UART interface streaming telemetry and device logs to CSV with real-time visualization.

Ocean Exploration Trust

September 2024 - May 2025

Software Engineer Contractor - C++, Python, Unreal Engine

Narragansett, RI

- Architected an Unreal Engine 5 deep-sea simulator as the sole C++ engineer, integrating LiDAR, multibeam, photogrammetry, and dive telemetry into a unified real-time geospatial system.
- Built a modular time-sync system for ROV video, vehicle position, and pilot paths across multi-hour dives.
- Led globe-scale Cesium integration for underwater use cases, driving extensions through Cesium collaboration.
- Deployed an Ubuntu server for a containerized Perforce stack, Jenkins, and Authentik over a dedicated subnet.
- Mentored three undergraduate interns through code review and feature development on the C++ codebase.

HFDesignworks - FortiFly

June 2024 – August 2024

Software Engineer Intern - C#, Python

Louisville, CO

- Built a C# eye-tracking module reading Tobii sensor data and streaming via WebSockets to analysis tools.
- Developed a real-time Python gaze heatmap visualizer in OpenCV for monitoring pilot attention in simulation.
- Bridged C#-only sensor APIs with Python tooling, enabling cross-language data flow in a multimodal pipeline.

ThayerMahan

June 2023 – August 2023

Simulation Intern - C++, Unreal Engine

Groton, CT

- Built procedural traffic and graph-based A* routing systems in Unreal C++ for an AI pilot training simulator.

NOAA Ocean Exploration Cooperative Institute

November 2022 – May 2023

Software Engineer Intern - Python, Keras, JavaScript

Narragansett, RI

- Optimized a deep-sea video highlight generator with batching and parallel processing, reducing runtime by 80%.
- Built a WordPress plugin pulling live Google Sheets data into the OEI website, maintained by URI on GitHub.

PROJECTS

OEI Vessel Carbon Footprint Tracker

Spring 2025

Node.js - CesiumJS - ClimaTiq API

NOAA Ocean Exploration Cooperative Institute

- Built a Node.js web app visualizing vessel emissions on a CesiumJS 3D globe via the ClimaTiq API.

SKILLS

- **Languages:** C++, C, Python, Embedded C, C#, Java, JavaScript, Lua, PHP
- **Systems & Tools:** Linux, Docker, STM32, UART, Git, Perforce, Jenkins, Authentik, Bash, Node.js
- **Libraries & Frameworks:** Unreal Engine, Cesium, OpenCV, OpenGL, Keras, WebSockets