

# LUKE JIANU

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## EDUCATION

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### Northeastern University

Sept. 2021 - May 2025

B.S. in Computer Science, 4.00/4.00 GPA, Dean's Merit Scholarship

*Boston, MA*

#### *Relevant*

Object-Oriented Design, Algorithms & Data, Logic & Computation

#### *Coursework*

Database Design, Foundations of Data Science, Foundations of Cybersecurity

## EXPERIENCE

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### Belvedere Trading

June 2023 - Aug. 2023

*Software Engineer Intern*

*Chicago, IL*

- Built a low-latency, service-agnostic proxy in C++ to aggregate redundant TCP connections between datacenters, resulting in a **70% reduction** in bandwidth usage for proxied services.
- Optimized performance through the use of asynchronous message passing, implemented with the visitor design pattern (std::variant), enabling the processing of **5.4Tb of data** daily.
- Upgraded the C# service discovery algorithm to match clients with services in the same datacenter.

### Amazon Robotics

Jan. 2023 - June 2023

*Software Development Engineer Co-op*

*North Reading, MA*

- Empowered AR teams to rapidly grow, monitor and manage their device fleets at scale by inventing and simplifying features in my team's **Comprehensive Device Management** solution.
- Architected an efficient, fault-tolerant workflow in AWS Lambda with Kotlin for modifying robot location data, enabling teams to avoid **1000+ hours** of OS and software reinstalls yearly.
- Designed a device timeline feature in AWS CDK with TypeScript, providing insights for **30k+ devices**.
- Refactored a large, imperative-style vanilla React codebase with functional-style TypeScript & React Query, resulting in a **75% reduction** in API calls and **50% faster** loading times.

### S3Global

May 2022 - Aug. 2022

*Software Development Intern*

*Redmond, WA*

- Designed C++ tooling for benchmarking, testing, and managing **12 high-speed cameras** used to capture computer vision training data from the top youth football academies in Spain.
- Implemented a prototype video streaming system with shared frame buffers, leveraging C++ interop with the camera's SDK to display frames in a C# WPF frontend.

## PROJECTS

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### NUCarpool

Sept. 2022 - Present

*Software Developer at Sandbox*

*Boston, MA*

- Developing a web app using the T3 stack for Northeastern students to find co-op carpool groups.

### Trading Bot

July 2022

*Participant at Jane Street's Electronic Trading Challenge*

*Seattle, WA*

- Placed **10<sup>th</sup>** by quickly programming penny-pinching and ADR/ETF arbitrage strategies in Python.

## TECHNICAL SKILLS

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### Computer Languages

C++, Java, Python, JavaScript, TypeScript, SQL

### Tools & Technologies

Vim, Linux, Git, AWS, Docker, Node, React, Prisma, Flask, Splunk