

# LUKE JIANU

+1(425) 229-1106 ◊ jianuluke@gmail.com ◊ [github/lukejianu](https://github.com/lukejianu) ◊ [linkedin/lukejianu](https://www.linkedin.com/in/lukejianu)

## 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** Software Development, Compiler Design, Programming Languages  
**Coursework** Computer Systems, Systems Security, Network Fundamentals

**Teaching** Logic & Computation, [Daniel Patterson](#) (Spring 2024)  
**Assistant** Software Development, [Matthias Felleisen](#) (Fall 2024)

## EXPERIENCE

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**Databricks** May 2024 - Aug. 2024  
*Incoming Software Engineer Intern* *Bellevue, WA*

**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::visit`), 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 a new, fault-tolerant workflow in AWS Lambda with Kotlin for modifying robot location data, performing **20 times faster** than the old workflow.
- 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 **95% 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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**[Rust Operating System](#)** Dec. 2023 - Present

- Designing and developing a small OS in Rust, with a focus on systematic design, loosely following the blog post [Writing an OS in Rust](#) by [Philipp Oppermann](#).

## TECHNICAL SKILLS

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**Programming Languages** Java, C/C++, Python, TypeScript, JavaScript, SQL  
**Tools & Technologies** Vim, Linux, Git, AWS, Docker, Node, React