LUKE JIANU

+1(425) 229-1106 ◇ jianuluke@gmail.com ◇ github/lukejianu ◇ linkedin/lukejianu

EDUCATION

Northeastern University Sept. 2021 - May 2025
B.S. in Computer Science, 4.00/4.00 GPA, Dean's Merit Scholarship *Boston, MA*

Relevant Coursework Software Development, Object-Oriented Design, Algorithms & Data Computer Systems, Programming Languages, Database Design

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

EXPERIENCE

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 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 **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

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

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