

# LUKE JIANU

+1(425) 229-1106 ◇ jianuluke@gmail.com ◇ [github/lukejianu](https://github.com/lukejianu) ◇ [linkedin/lukejianu](https://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** Fundamentals of CS I, [Daniel Patterson](#) (Fall 2024)  
Software Development, [Matthias Felleisen](#) (Fall 2024)

## EXPERIENCE

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**Databricks** May 2024 - Aug. 2024  
*Software Engineer Intern* *Bellevue, WA*  
· Extending a testing tool in Scala to evaluate the performance of a distributed OLTP database under production traffic loads.

**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.  
· 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.  
· 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.

## 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.

**x64 Compiler** Jan. 2024 - Apr. 2024  
· Wrote a compiler for a functional language in OCaml, targeting x64 assembly with a C runtime.  
· Supported modern features such as first-class functions, continuations (call/cc), and garbage collection.

## TECHNICAL SKILLS

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<b>Programming Languages</b>	Java, C/C++, Python, JavaScript, SQL
<b>Tools &amp; Technologies</b>	Vim, Linux, Git, AWS, Docker, Kubernetes, React