

Jason Priest

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EDUCATION

- **Massachusetts Institute of Technology** Cambridge, MA
Candidate for B.S. in Computer Science and Engineering; Technical GPA: 4.5 / 5.0 Aug. 2015 – Dec. 2020

PROJECTS

- **Denuo C Compiler:** A work-in-progress C compiler written in Rust 2019
 - Standard-compliant preprocessor with precise error tracking across file inclusion and macro expansion
 - handwritten LL(2) parser, along with tools to generate look ahead tables for any LL(k) grammar
- **VOS / Denuos:** Two separate attempts at toy operating system kernel written in Rust 2015
- **LBI:** A Lua virtual machine bytecode interpreter, written in Lua 2012
- **MODS:** Assembler for the Lua bytecode format 2011

EXPERIENCE

- **Touchplan.io** Boston, MA
Software Engineer Feb 2020 – Present
 - **Backend:** Maintained and extended a Java backend server for a construction planning SaaS platform
 - **Scalability:** Created benchmarks to replicate production load as well as identified and eliminated bottlenecks preventing further growth
 - **Database:** Optimized problematic queries and maintained business logic for a PostgreSQL Database
 - **Cluster Orchestration:** Improved task scheduling in the server cluster to increase resource utilization
 - **Devops:** Helped automate the maintenance of linux server clusters
 - **Google Cloud Platform:** Worked extensively with Google Firebase/Firestore and Google Cloud Storage
- **MIT Lincoln Lab / MIT CSAIL** Lexington, MA
Student Researcher Fall 2019
 - **Secure Operating System:** Worked on team developing a prototype OS for a new RISC-V based tagged CPU architecture aimed at improved security. Worked with C and Rust.
- **Broadway Technology** New York, NY
Intern Summer 2018
 - **Financial Technology:** Developed FIX protocol backend for a new financial instrument on a platform connecting exchanges to a wide variety of financial institutions
 - **Optimizations:** Profiled, benchmarked, and tested optimizations in a C++ codebase
- **Ab Initio** Lexington, MA
Intern Summer 2017
 - **Big Data Processing:** Added new frontend to compiler for data processing workflows and developed new optimizations within the existing compiler framework. Worked with C++.
- **MIT Lincoln Lab** Cambridge, MA
Student Researcher Fall 2016
 - **Reverse Engineering:** Performed research in reverse engineering and simulating PowerPC Linux wireless access points
- **Touchplan.io** Boston, MA
Intern Summer 2016
 - **Cluster Orchestration:** Implemented high-availability, online upgrading, and improved cooperative features for a Java and PostgreSQL backend server with Apache Mesos and ZooKeeper
 - **Continuous Delivery:** Introduced continuous delivery systems using Atlassian Pipelines which build and deploy new versions of the backend code to a test environment

PROGRAMMING SKILLS

- **Languages:** C, C++, Python, Java, PostgreSQL, Rust, Lua, x86 Assembly
- **Tools:** git, perforce, svn, make/cmake, gcc/clang, ld, gdb, vim/emacs, valgrind, perf
- **Operating Systems:** Windows, Mac OS X, Ubuntu