# Damian Ho

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## EDUCATION

### STANFORD UNIVERSITY

M.S. in Computer Science
Systems Specialization
Dec 2025 | Stanford, CA | GPA: 4.186

Selected Coursework
- (Advanced) Operating Systems
- Computer Networking
- Advanced Data Structures
- Advanced Compilers
- Blockchain Technologies
- Cryptography

### CARNEGIE MELLON UNIVERSITY

B.S. in Computer Science
Computer Systems Concentration
May 2024 | Pittsburgh, PA | GPA: 4.00

Selected Coursework
- Competitive Programming
- Computer Security
- Compiler Design
- Parallel Computer Architecture
- Distributed Systems
- Database Systems

## SKILLS

Languages
C++ • JavaScript • OCaml • Python

Frameworks
FastAPI • React • Ruby on Rails

Software Infrastructure
Docker • MySQL • PostgreSQL

## PROJECTS

C0 Compiler
Skills: C • OCaml • x86 Assembly
- Built optimizing compiler for safe subset of C targeting x86-64
- Achieved up to 2x speedup via tail calls, strength reduction and coalescing
- Extended language with variadic functions and function pointers

Lock-free Radix Trees for IP Routing
Skills: C++
- Used CAS to scale lookups and updates across threads
- Benchmarked under simulated network workloads, achieving over 50 ops/μs with 8 threads

## EXPERIENCE

### JANE STREET | Software Engineer

New York, NY | Mar 2026 - Present
Skills: OCaml • Parquet
- Building an in-house distributed database for OLAP workloads
- Built tool that picks more compact Parquet encodings
- Re-encoded historical data, reclaiming petabytes of storage

### STANFORD UNIVERSITY | Graduate Course Assistant

Stanford, CA | Oct 2025 - Dec 2025
Skills: C++ • Python
- Assisted Prof. Keith Winstein with CS 144 (Computer Networking)
- Designed exam questions, held office hours and graded student assignments
- Automated functionality tests for student code on Gradescope

### HUDSON RIVER TRADING | Software Engineer Intern

New York, NY | Jun 2025 - Aug 2025
Skills: C++ • FastAPI • PostgreSQL • Python • React
- Built shared-memory progress tracking for distributed compute jobs
- Developed and load-tested asynchronous API service handling 500 req/s
- Optimized trace ingestion pipeline, increasing throughput by 2.25x

### JUMP TRADING | Software Engineer Intern

Chicago, IL | Jun 2024 - Aug 2024
Skills: C++ • Python • MySQL
- Built 1M trades/min drop copy pipeline for end-of-day reconciliation
- Unified log processing across internal tools, removing duplicate I/O code
- Developed CLI tools to control live trading services, such as toggling sessions

### AUTOLAB | Software Developer (Project Lead)

Pittsburgh, PA | Mar 2022 - May 2024
Skills: Docker • JavaScript • Jenkins • Ruby on Rails
- Led CMU team of eight under Profs. David O'Hallaron and Gregory Kesden
- Migrated Rails application deployment to AWS CloudFormation
- Patched vulnerabilities, including CVE-2022-41955 and CVE-2023-32317

## AWARDS

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|---|---|---|
| Nov 2025 | **ICPC Pacific Northwest Regional Contest (D1)**<br>3rd of 6 Stanford teams | 6th / 69 teams |
| Nov 2024 | **ICPC Pacific Northwest Regional Contest (D1)**<br>1st of 5 Stanford teams<br>Honorable mention at ICPC NAC 2025 | 5th / 69 teams |
| Oct 2023 | **ICPC NA East Division**<br>One of 7 teams representing CMU | 26th / 177 teams |
| Mar 2023 | **Ready Trader Go** \| Optiver<br>Applied Avellaneda–Stoikov in low-latency C++ | Top 32 / 2,800 |
| Feb 2023 | **ICPC East Central NA Regional Contest**<br>2nd of 6 CMU teams | 7th / 92 teams |
| Feb 2022 | **Quantathon** \| CMU Quant Club + Goldman Sachs<br>Tackled the multi-armed bandit problem | 2nd / 30 teams |
| Jan 2017 | **USA Computing Olympiad** | Platinum Division |
| 2015–18 | **Singapore National Olympiad in Informatics** | 1x Silver, 3x Gold |