

Oustan Ding

oustanding.me

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Education

University of Waterloo

Sep 2019 - Apr 2024

Bachelor of Software Engineering, Honors

- 94% cumulative average (3.98/4 GPA), 6x Dean's Honors List

Experience

Citadel

Jun 2023 - Aug 2023

Quantitative Research Engineer Intern (Global Quantitative Strategies)

Chicago, IL

- Investigated Redis for use in feature transport within live alpha prediction pipeline, against existing approaches. Decreased transport latency by **64%** and improved horizontal scalability of inference jobs on the critical path.
- Built an extensible monitoring framework for production Redis servers to detect and report user-defined error conditions.
- Implemented a service registry on top of existing alpha metadata service using Python and gRPC. Augmented inference pipelines with automatic failover while providing seamless integration.

Jane Street

Jan 2023 - Apr 2023

Software Engineer Intern

New York, NY

- Increased write throughput of ETF composition data service by **150%** through eliminating 90% of database readbacks and optimizing self-adjusting computation graph for efficient updates.
- Built core features for a firm-wide resource management tool using OCaml and Kafka to streamline user experience.
- Optimized service managing FSM entities by aggregating redundant state transitions, reducing storage usage by 70%.

Bloomberg

May 2022 - Aug 2022

Software Engineer Intern

New York, NY

- Reduced latency of market value calculations for fixed income ETFs by **99%** through designing and implementing a system consisting of multithreaded Python services with distributed Redis caching. Increased throughput by **5x**.
- Built scalable data pipelines using RabbitMQ and Kafka to capture intraday price snapshots of 94,000 securities daily.
- Analyzed real-time system performance using Humio dashboards to identify target asset classes for optimization.

Wish

Sep 2021 - Dec 2021

Software Engineer Intern

Seattle, WA

- Piloted a monorepo-based workflow for UI component development. Shortened builds from **5 minutes to 10 seconds**.
- Led mission-critical development initiatives to expedite the launch of an in-house shipping solution for merchants.

Wish

Jan 2021 - Apr 2021

Software Engineer Intern

San Francisco, CA

- Rebuilt firm-wide user management system using GraphQL APIs and a cache layer to improve responsiveness by **49%**.
- Built an asynchronous declarative workflow for editing user roles and permissions, saving engineers **4 hours/month**.

OnCall Health

May 2020 - Aug 2020

Full Stack Software Engineer Intern

Toronto, ON

- Introduced key telehealth features including bulk appointment scheduling and accessible document exchange using Django and React. Improved efficiency of administrative procedures by 75% for all clinics.

Projects

Technical Lead @ UW Blueprint: Led a team of 10 developers and designers to build open-source software for social good. Scoped and executed engineering roadmap to develop a fully-integrated application processing system generating \$88,000 revenue/year for [Richmond Centre for Disability](#).

nestris: An online platform allowing players to compete in Classic Tetris in real-time, built with React and websockets. Designed a [pixel analysis algorithm](#) to identify upcoming piece sequences 4 times/sec with 99% accuracy.

Skills

Languages: Python, C++, TypeScript, Java, Go, Rust, OCaml, JavaScript, SQL, HTML, CSS

Technologies: GraphQL, React, React Native, PostgreSQL, MongoDB, Redis, RabbitMQ, Kafka, gRPC, Node.js, Next.js, pandas, NumPy, AWS, Docker, Bazel, Git, Linux, Bash