Curtis Chong

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Education

University of Waterloo · Bachelor of Software Engineering Co-op   Apr 2023

Courses: Concurrency · Distributed Systems · Feedback Control · Stochastic Processes · Forecasting

Experience

Jane Street   New York
SWE Intern · Cybersecurity Team   Jan – Apr 2022
- Developed filters to block network packets that come from malicious IPs or carry invalid TLS certificates
- Classified IPs as safe or malicious in under **20 μs** via a trie-based lookup table
- Designed bots to listen for malicious IP announcements and stream the latest updates to the lookup table
- Leveraged **Zookeeper** to routinely backup job state so users can restore crashed jobs on standby servers

Citadel Securities   Chicago
SRE Intern · Trade Execution Services Team   Sep – Dec 2022
- Unified order events into trader consoles, eliminating the need for ad-hoc and complex qSQL queries.
- Crafted high-performant scripts to efficiently extract and transform **terabytes of logs** into KDB
- Upgraded an XML interpreter to parse nested FlatBuffer messages, simplifying hundreds of lines of code

BitGo   San Francisco
SWE Intern · Trade Execution Team   Jan – Apr 2020
- Wrote **trading algorithms** (Sweep and TWAP) to place orders across crypto exchanges at the best prices
- Developed a testing suite that simulates market conditions to safeguard engine stability
- Designed race-free state machines and exchange balance tracking services to ensure stable trades
- Integrated **Prometheus** metrics into our trading engine to identify performance bottlenecks

BitGo   Remote
SWE Intern · Trade Execution Team   Sep – Dec 2020
- Developed algorithms to correct interrupted trades, expediting client support from **hours to minutes**
- Leveraged **Protobufs** to snapshot our trading engine's entire state, allowing us to replay and debug trades
- Decreased account balance queries by **80%** using a Redis cache
- Reduced tech debt in our algorithms, request, and rounding logic, simplifying code for other engineers

Grammarly   Remote
SWE Intern · Grammarly for Businesses Team   May – Aug 2021
- Expedited **DynamoDB** queries from **68 ms to 41 ms** by optimizing the schema for reads
- Unified request authorization logic by proxying requests through a Spring API Gateway
- Standardized integration tests, simplified server configs, and surfaced hidden errors to Kibana

Skills

Languages: C++ · Python · Golang · Typescript · Java · OCaml
Technologies: Docker · SQL · GraphQL · React · Zookeeper