

Thomas Kou

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Languages Python, OCaml, JavaScript, TypeScript, PHP, Hack, C++, Java, Kotlin, C, SQL, Scala
Tools Node.js, React, GraphQL, Relay, Flask, AWS, Express.js, Spring Boot, Redux, Sass

EXPERIENCE

Citadel • *Equities Quantitative Research*

New York, NY

Quantitative Developer Intern

Sept. 2022 – Dec. 2022

- Implemented support for storing backwards-looking date ranges in **temporal cache system** by adding sub-indexing functionality when evaluating existence of records in the cache, allowing for fast daily computation of **equity risk models**.
- Optimized crucial algorithm that performs mathematical set operations on stock symbols over date ranges, making evaluation of cache completeness **97.8% faster** when computing risk models.

Jane Street

New York, NY

Software Engineer Intern

May. 2022 – Aug. 2022

- Created system that updates market data server with symbol/route mappings in real-time using **live order data**, enabling consumption of MiFID trade feeds in Europe.
- Developed an internal **code generation library** used by order lookup system to enumerate syntactic cases when parsing config tree files, enabling compiler to type-check semantic correctness.

Meta • *VR Developer Engagement*

Menlo Park, CA

Software Engineer Intern

Jan. 2022 – Apr. 2022

- Led development of **comfort tagging** feature on virtual reality storefront, increasing consumer awareness of VR comfort and addressing the #1 cause of VR store returns & refunds for 10M+ users.
- Designed an internal dashboard using **PHP**, **GraphQL**, and **React** for storefront employees to manage tag metadata.

NVIDIA • *GeForce NOW*

Santa Clara, CA

Software Engineer Intern

May 2021 – Aug. 2021

- Worked on **content management system** that shows targeted marketing content to 10M+ users on the GeForce NOW client.
- Built an internal **layout preview feature** using **Python**, **Flask**, and **React** for content managers to preview the GeForce NOW client storefront by overriding user targeting parameters, streamlining marketing workflows.

FISPAN • *ERP Development Team*

Vancouver, BC

Software Developer Co-op

Sept. 2020 – Dec. 2020

- Integrated Quickbooks bookkeeping system into all-in-one **fintech software** to expand services to **100+ small businesses**.

Wish • *Product Payments*

San Francisco, CA

Software Engineer Intern

Jan. 2020 – Apr. 2020

- Developed **Python backend** APIs that use **PayPal** to collect owed cash payments from partnered Wish Blue satellite stores.
- Expanded pay-in-installments feature on **iOS/Android** to the UK, leading to a projected **\$6.3 million increase** in annual GMV.

EDUCATION

University of Waterloo • **Bachelor of Computer Science, Honours, Co-op**

Sept. 2018 – Apr. 2023

- Math & Engineering Dean's Honours Lists – GPA 3.96/4 (92%)
- Algorithms, Data Structures, Machine Learning, Distributed Data, Operating Systems, Database Management, Networks