**Jonathan Chiu**

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# SUMMARY

Highly motivated Software Engineer and Mathematician with a proven track record of developing high-quality web applications that increase product performance and user engagement. Skilled in continuous integration and delivery, unit testing, and optimising program execution efficiency. Strong academic background in Mathematics and Computer Science, with experience in Blockchain and Financial Operations Engineering.

# WORK EXPERIENCE

**Technology Intern**, Microsoft, April 2023 – Current

* Achieved a highly competitive internship position at Microsoft after successfully standing out from a pool of thousands of candidates.

**Software Engineer,** Ting, January 2022 - Current

* Developed a Web Application utilising React to create a 21% increase in product performance and a 35% increase in user engagement. Implemented continuous integration and delivery practices to ensure proper code deployment.
* Identified 35% of previously missed errors through implementing unit testing, improving code reliability and maintainability thus gaining experience in Agile development.

**Blockchain Research Engineering Intern**, Queen Mary University of London, June 2022 – August 2022

* Checked the Contextual Equivalence of programs in Ethereum Smart Contracts to find bugs by using Operational and Game Semantics in collaboration with Trinity College Dublin. Optimised program execution efficiency by improving code coverage accuracy by 5% and decreasing execution time by 20%.
* Wrote smart contracts using Solidity which were then translated into HOBBIT, developing programming skills in OCaml and familiarity with Blockchain.
* Improved analysis time by 80% with tools such as Ethereum’s Truffle and static code analysers.

**Teaching Assistant**, Queen Mary University of London, September 2021 – Current

* Taught hundreds of students across modules such as Algorithms & Data Structures, Software Engineering, Procedural Programming, Logic & Discrete Structures, and Probability and Matrices.
* Provided exceptional support to students by offering thorough and concise explanations, as well as expert guidance on the module material to ensure their success.
* Invented and created questions for the modules that reflected learning outcomes, and prepared and monitored examinations.

**Finance Operations & Tech Engineering Intern**, Rabobank, July 2019 - August 2019

* Successfully developed and implemented a cutting-edge algorithm using Java to merge data sets, resulting in a remarkable 7% improvement in the live environment.
* Demonstrated exceptional project management skills by delivering a comprehensive system design, utilising Visio software and adhering to strict deadlines.
* Acquired valuable expertise in the Murex System and effectively migrated the test environment of Trading software, reducing run time by 5%. Proactively identified and resolved issues, ensuring a smooth transition to the new system.

# PROJECTS

## Stock Trading System

* Designed and created a stock trading system using Java and created the GUI using Swing and implemented API calls to use the live feed of data in the system.

## Extended Project Qualification, Bitcoin Dissertation

* Conducted research on Bitcoin, focussing on the workings of Bitcoin, and developed an understanding of Cryptography such as the use of Merkle trees when verifying transactions and the Blockchain.

# EDUCATION

**Queen Mary**, Mathematics & Computer Science, September 2020 – July 2023

* First Year 92%, Second Year 87.8% (Expected First Class)

**Elthorne Park High School**, September 2013 – August 2020

* A-levels A\*AAA (Extended Project, Maths, Further Maths, Computer Science), 8 GCSEs (A\*-A)

# SKILLS

**Software**

* Microsoft Office, Word, PowerPoint, Excel, GitHub, Visual Paradigm, Visio, and Latex.

**Mathematics**

* Linear Algebra, Calculus, Probability & Statistics, and Linear Programming.

## Programming Languages

* Java, JavaScript, Django, React, Vue JS, SQL, Solidity, R, Git and Python.