

Ulysses Kee

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Work Authorization: US (H1-B1, no petition required)

EDUCATION

National University of Singapore

MS in Computer Science (First-Class Honours)

Singapore, SG

Jan. 2021 – Jan. 2023

Thesis: Algorithmic Trading with Case Based Reasoning and Multi-Agent Systems

University of Warwick

Bachelor of Science in Management with Finance (First-Class Honours)

Coventry, UK

Oct. 2017 – Jul. 2020

Relevant Courses: *Econometrics, Database Systems, Data Science, Investment Management, Statistics*

EXPERIENCE

Data Engineer Intern

Binance

Remote, SG

Feb. 2023 – Aug. 2023

- Working on the **Real-Time Data Platform** team, responsible for building data pipelines using Kafka, Airflow, and Flink.
- Developed Airflow DAGs to effectively coordinate Spark operator jobs, automating **daily batch data syncing**.
- Working on building **ETL pipelines** in Flink for real-time data synchronization from Kafka topics into target tables in StarRocks.

Research Intern

NUS - Singapore Blockchain Innovation Programme

Singapore, SG

Aug. 2022 – Feb. 2023

- Refactored the frontend UI of Verazt, a **static analysis** tool used to automatically find security bugs and vulnerabilities in smart contracts.
- Developed a **call graph visualization tool** used to analyse the structure of Solidity smart contracts.
- Developed a **parsing expression grammar (PEG)** used for the parsing of semantic tests from the official Solidity repository into internal Rust data structures using the pest parser.

Graduate Teaching Assistant

NUS School of Computing

Singapore, SG

Jan. 2022 – Dec. 2022

- **Software Engineering on Application Architecture (IT5007):** Prof. Prasanna Karthik Vairam
- **Software Development Fundamentals (IT5001):** Prof. Alan Cheng

Software Engineer Intern

Cloudflare

Singapore, SG

Dec. 2021 – May. 2022

- Developed FlareTools, a **web-based application**, to help internal teams and partners gain better visibility over product configurations, and copy configuration records and settings easily.
- Presented my project in a **global** company-wide meeting and published a blog about it.

Data Analyst

Canopy

Singapore, SG

Jul. 2020 – Jun. 2021

- Worked with Python to clean and transform parsed raw data into a standardized format used for downstream financial analysis and processing.

PROJECTS

Octoplorer | TypeScript, Python, ETHGlobal Tokyo Hackathon (Finalist)

Apr. 2023

- Developed a blockchain explorer which uses **natural language queries** as input and displays intuitive human readable answers in the form of text, tables, or charts on a React frontend.

P2P Distributed Game | Java, Distributed Systems

Sep. 2022 – Oct. 2022

- Developed a **peer-to-peer** distributed maze game in Java using Java RMI and implemented mutual exclusion between threads via locks.

Definitional Interpreter | JavaScript, Scilla, OCaml

Jan. 2022 – Apr. 2022

- Developed a definitional interpreter and type checker for Scilla (an intermediate-level language smart contract language developed for the **Zilliqa** blockchain) in JavaScript.

TECHNICAL SKILLS

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

Frameworks: React, Node.js, Express, MongoDB, GraphQL, Docker, LaTeX, Hadoop, Spark, Airflow, Flink, Kafka