

Ulysses Kee

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Work Authorization: US (H1-B1, no petition required) | UK (Graduate Visa) | SG (Citizen)

EDUCATION

National University of Singapore Singapore, SG
MS in Computer Science (First-Class Honours) Jan. 2021 – Jan. 2023
Thesis: Algorithmic Trading with Case Based Reasoning and Multi-Agent Systems

University of Warwick Coventry, UK
Bachelor of Science in Management with Finance (First-Class Honours) Oct. 2017 – Jul. 2020
Relevant Courses: *Econometrics, Database Systems, Data Science, Investment Management, Statistics*

EXPERIENCE

Data Engineer Intern Remote, SG
Binance Feb 2023 - Aug 2023

- Developed Airflow DAGs to effectively coordinate Spark operator jobs, automating daily batch data syncing.
- Designed and implemented Flink workflows for real-time data synchronization from Kafka topics into target tables in StarRocks.

Research Intern Singapore, SG
NUS - Singapore Blockchain Innovation Programme 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.

Software Engineer Intern Singapore, SG
Cloudflare Dec. 2021 - May 2022

- Developed FlareTools, a web-based application using React, Chakra UI and Cloudflare Workers, to help internal teams and partners gain better visibility over product configurations, and copy configuration records and settings easily.
- Developed a set of REST API services deployed on Cloudflare Workers which was used to interface with the Cloudflare v4 APIs.

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