# Ulysses Kee

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**Work Authorization: Singapore Citizen**

## EDUCATION

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| **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

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| **University of Warwick** | Singapore, SG |
| 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

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| **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.

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| **Software Engineer 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 using React, TailwindCSS and Next.js.
- 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.

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| **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.
- Presented my project in a global company-wide meeting and published a blog about it.

## PROJECTS

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| **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 built using TailwindCSS and Next.js.

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| **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.

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| **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, SQL, HTML/CSS
**Frameworks**: React, Node.js, Express, MongoDB, GraphQL, Docker, LaTeX, Hadoop, Spark, Airflow, Flink, Kafka