Ooi Siu Pei

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EDUCATION

Imperial College London   Oct '21 – Jun '25

MEng Computing (Artificial Intelligence and Machine Learning)
- Awarded Dean's List in Year 2 and 3 (84.12%)
- Undergraduate Teaching Assistant for first-year programming assignments and Mathematics tutorials.
- Modules include Introduction to Machine Learning, Computer Vision, Theory and Practice of Concurrent Programming, Probability and Statistics.

WORK/LEADERSHIP EXPERIENCE

Morgan Stanley | *Java, Scala, Spring Boot, Kafka, TypeScript, Lit*   Apr '24 – Sept '24

Technology Industrial Placement (Received return offer)
- Migrated a legacy service from Scala/REST to Java/Kafka, decommissioning 3,000+ lines of code, enhancing system performance, and reducing debugging time by developing a real-time tracking tool for key processes.
- Won Best Strategy in an **FX electronic trading challenge** by exploring models (Geometric Brownian Motion, Linear Regression, Mean Reversion), analysing historical data and implementing a custom back-testing framework to optimize strategies.

Optiver x Imperial Trading Academy | *Python*   Nov '23
- Implemented active arbitrage and passive quoting strategies to manage market liquidity in a dual listings setup.
- Applied the Black-Scholes model and delta hedging strategies, achieving a consistent $450 hourly PnL in a competitive trading environment.

IMC Global Trading Challenge | *Python*   Apr '24
- Ranked in the top 5% of an online electronic trading competition by building a systematic trading algorithm based on a linear regression price forecasting model, combined with active arbitrage and pair trading concepts.

Wise | *Java Spring Boot, SQL, NextJS, AngularJS, TypeScript*   Jun '23 – Sept '23

Software Engineering Intern (Received return offer)
- Reduced card dispute investigation time by 18 hours/month by streamlining data access through full-stack development on a back-office site, while migrating the site from AngularJS to NextJS to enhance performance and user experience.

Shopee Apprentice Program | *SQL, Python, JavaScript*   Jul '22 – Sept '22

Data Analytics (Platform User Growth) Intern
- Doubled data processing speed and increased data retrieval efficiency by 10x by automating Google Sheet updates and designing a data visualization dashboard using SQL and Python.

Jane Street INSIGHT Program Participant | *OCaml*   Apr '23
- Implemented arbitrage in an Electronic Trading Challenge and participated in coding exercises in OCaml.

PROJECTS

Parkscape Odyssey - David Howarth Group Project Prize | *Unity, C#, Python*   Jan '24 – Mar '24
- Developed a game integrating augmented reality, object recognition, and P2P systems for outdoor exploration.

IC Hack 2024 - Winner of the DoCSoc Creative Arts Category | *Python, React*   Feb '24
- Developed Logiquest, an AI-powered classroom tool designed to simplify coding and promote algorithmic thinking through natural language, presented in an engaging and visual format.

Other Projects
- **Pocket Patient** | *Flutter, Python, Django* - Developed a mobile app and website enabling seamless sharing of patient medical history with doctors and facilitating continuous patient monitoring.
- **WACC Compiler** | *Scala* - Collaborated with 4 others to build a compiler for a simple programming language.
- **PintOS** | *C* - Implemented priority scheduling, user programs and virtual memory for an operating system.

OTHERS

- Technical Fluency: Java, Spring Boot, Scala, Python, C, C++, C#, Haskell, Kotlin, JavaScript, TypeScript, LaTeX, HTML, CSS, React, SQL, OCaml, Flutter, Django, Unity
- Languages: English (Professional), Chinese (Native), Malay (Fluent)
- Other Experiences: Palantir Launch Program, Amazon Spring Technology Insights (Software Engineering), Merit in Securities Education Certificate, 22/23 Tech Hub Lead @ International Council of Malaysian Scholars and Associates (ICMS), 22/23 Vice Head of External Liaison @ iCUBE International, Piano (ABRSM Grade 8)