

Looi Shen Wei Brendan

10 Lorong Kota Raja, Taman Bukit Seputeh – WP Kuala Lumpur – Malaysia
☎ + (60) 16-661 1838 • ✉ shenweilooi@gmail.com • in brendanlooi

As a Software Developer with a foundation in Applied Mathematics, I combine broad technical understanding across software architecture and high-performance computing with analytical problem-solving to transform complex business challenges into scalable solutions. My versatility spans from optimizing trading systems and implementing data pipelines to driving the technical initiatives that deliver measurable impact.

Technical Skills

○ Programming Languages, Frameworks & Tools:

- Languages: **Python**, **C#**, **C++**, **Bash**, **mySQL**, **LaTeX**, Matlab, Maple, Java, Haskell, Ada 95, R, PHP
- Frameworks & Tools: **NumPy**, **Numba**, **HDF5**, **asyncio**, Pandas, websockets, multiprocessing, mmap, pytest, orjson, asyncSSH, sorted containers, PCAP, custom-made Python ↔ C bindings, Jupyter, Git, Docker, Coda, Slack, Flask, AWS

○ Notable Projects:

- Built a **local order book** using numba and C bindings to std::map
- Refactored an open-source library by replacing multithreading with async and multiprocessing for **market data retrieval** from APIs
- Optimized algorithm for **processing of logs** to improve real-time feedback, reducing single-threaded processing time by $\approx 90\%$

Work Experience

○ **Software Developer and Technical Project Coordinator** *Confinex Technologies – Python & C++ Development Team*

Penang, Malaysia
July 2022 – Present

Software Developer Responsibilities - *July 2022 – Present*

- Develop and maintain a high-frequency trading platform for large-scale, low-latency daily transaction volumes
- Proactively optimized software architecture for execution platforms, ensuring continuous improvement and competitive edge
- Developed resilient exchange connectivity through redundant API implementations, bug identification, and direct exchange collaboration
- Built fault-tolerant trading systems with automated regression testing, achieving zero critical failures during high-volume trading periods

Technical Project Coordinator Responsibilities - *December 2023 – Present*

- Led adoption of Agile/Scrum methodologies and sprint ceremonies, driving alignment between technical deliverables and business objectives
- Architected and implemented comprehensive system monitoring & alerting infrastructure, enhancing system scalability and enabling real-time incident response
- Initiated system-wide architectural refactoring, consolidating distributed configurations into a centralized framework that enabled streamlined development workflows (CI/CD, automated testing)
- Established and continuously refined development standards and tools, improving team efficiency and adaptability to changing project needs & requirements

○ **Junior Software Developer** *Stampede Solution – C# Volare Development Team*

Kuala Lumpur, Malaysia
July 2021 – July 2022

- Improved and optimized Volare, the main FinTech product, to decrease workflow inefficiencies for users
- Identified and mitigated multiple complex, critical flaws within the full product stack
- Worked in C# with mySQL, ViciDial, Ozeki, bash, PHP and several internal libraries

Education

○ **Colorado State University** *Bachelor of Science in Mathematics, Concentration in Applied Mathematics – Computer Science*

Fort Collins, CO, United States
Graduated May 2021

- **Relevant Mathematics Coursework:** Fourier and Wavelet Analysis, Numerical Analysis, Abstract Algebra, Ordinary/Partial Differential Equations, Advanced Calculus of One Variable, Projects in Applied Mathematics
- **Relevant Computer Science Coursework:** Software Development, Information and Coding Theory, Post-Quantum Cryptography, Mathematics of Information Security, Data Structures, Discrete Structures