YUK LUN KELVIN CHIU

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Quantitative Developer with 3 years of hands-on experience with C++20/Python 3.

WORK EXPERIENCE

Volatility Quantitative Developer June 2024 - Ongoing
Man AHL *London, UK*

Core Quantitative Developer, Assistant Vice President Jul 2020 - May 2023
Barclays Investment Bank *London, UK*

- Co-engineered caching architecture within the C++ data library, with asynchronous in-memory and network attached storage file caching boosting risk run performance by 30% whilst also resolving transient network issues in production.
- Implemented runtime overrides of risk calculation results within the C++ tensor library, resolving result consumption issues in production and achieving widespread adoption across asset classes.
- Co-developed shadow batches, a fault-tolerant Python/Jenkins pipeline for automating pre-production risk runs with over 1 million trades.
- Developed finite difference solvers for the Heston model in a proprietary language and assessed their performance in contrast to a native C++ implementation.
- Enforced standards on code quality and design as a appointed gatekeeper within a team of 40 members, frequently presenting team wide to ensure consistent knowledge adoption.

EDUCATION

MSc Mathematical and Computational Finance, with Distinction Sep 2019 – Jul 2020
Oxford University *Oxford, UK*

BSc Mathematics, with First Class Honours Sep 2016 - Jul 2019
Warwick University *Coventry, UK*

PROJECTS

- Spearheaded a team in creating Sporkfish, a high performance numba Python chess AI.
- Implemented EMCE, an extensible Monte Carlo C++/CUDA framework for options pricing.
- Ranked among the top 2% of 1 million users on Project Euler.
- Investigated modelling scheduling with argumentation in MS-Arg; completed at Imperial College London.

SKILLS

- **Programming**: C++ (STL, CMake), Python (numpy, pandas), Bash
- **Performance Optimisations**: multi-threading, asynchronous programming, vectorisation, JIT
- **DevOps**: Docker, git, testing (pytest, GoogleTest), CI/CD (Jenkins), perf analysis (perft)
- **Numerical Techniques**: Monte Carlo, finite differences, stochastic calculus, time series analysis
- **Languages**: English (native), Cantonese (conversational), Mandarin (conversational)