Karl Kareem Melaimi

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Education:

Imperial College London	**2018 - 2022**

MEng Electronic and Information Engineering (Computer Engineering)	**Grade 2:1**

- Optimisation
- Probabilistic Inference
- Deep learning
- Mathematics for Machine Learning
- Probability & Stochastic Processes
- Decentralised Finance
- Signal Processing & Machine Learning for Finance

Wembley High Technology College	**2010 - 2017**

- A-Levels: Mathematics (A*), Further Mathematics (A*), Physics (A), AS-Economics(A)

Relevant Work Experience:

Aspect Capital, Quant Researcher, Execution Research	**May 2022 – Now**

- Initial developer/researcher of a greenfield build of KDB infrastructure for algorithm development, slippage measurement, trade scheduling and strategy implementation analysis

Aspect Capital, Investment Solutions & Quant Research Intern	**March 2021 – Oct 2021**

- Notable projects: Built a simulation environment for the **Investment Solutions** team in **Python**, integrated with **PowerBI**. It applied various **vectorised** methods to transform the PnL timeseries input into key statistics (**VaR**, **CARR**, **Drawdowns** etc) and graphical visualisations in an **interactive dashboard**.

  Developed a low touch framework for **multivariate regression**, enabling colleagues to run regressions of macroeconomic variables against returns without looking at any code (**Python**, **SQL**).

- Built intraday reporting tools for the **Volatility Research** team in **MATLAB** which attributed PnL to **first** & **second order Greeks**, granting a more thorough understanding of the underlying market dynamics affecting our positions.

  Gained familiarity with the nuances of option pricing as well as experience with productionising code (**Jenkins**, **Docker**, etc)

- Worked with **Systematic Global Macro** researchers to prepare a signal for a **research review**, this is IP sensitive so no details for you!

- Efforts culminated in a **full time offer** as a **Quantitative Researcher**!

Tudor Investment Corp, Quant Risk Analyst	**July 2019 – Sept 2019**

- Developing a range of tools for the Risk team in Python (Significant Bloomberg API use) used by **~10 people across £10B AUM**

- Acted as **Full Stack Developer** managing successful firmwide deployment across business (**2k** lines of production code live)

- Aiding traders in performing market analysis by providing **statistical analysis** and **data visualisation** to their workflow

Kaiku, (https://www.kaiku.co/) - Strategy & Deals	**October 2018 – December 2019**

- Reaching out to & handling **manual onboarding** of our start-ups & Investors

- **Leading** the product team, deciding/creating the content for our website & social media

- Consulting entrepreneurs, interviewing understand content requirements and start-up user needs

Bloomberg, Global Data Analyst, Economics   Sept 2017 – Sept 2018

- Carrying out data analysis within **Python**, using Pandas/NumPy/Matplotlib.
- Created a script used in monthly meetings to provide insights into stale tickers
- Data manipulation within **Excel/VBA** and internal Bloomberg tools for parsing data
- **100%** of client queries answered within Service-Level agreement time

Other Experience:

Jane Street, Electronic Trading Competition   October 2020
- Developed a novel trading strategy in a simulated market maintaining top 10 PnL rank… It all went wrong when I replicated code without changing the trade direction, causing me to buy a certain instrument without selling, incurring roughly 300k of debt. I have learned my lesson!

IMC, Quantitative Trading Workshop   October 2020
- Learned the basics of Option theory and implemented a few interesting strategies, including delta-one hedging. Please ask me about this!

Facebook, Analytics Academy 2020   October 2020
- Performed basic statistical analysis to discover insights about user habits from multiple datasets using Python, (NumPy, Pandas, etc), and present these to a panel at Facebook

Citadel, Trading Simulation Challenge   November 2020
- A comprehensive introduction into the roles of a hedge fund and market maker; challenges included manual market making to get to grips with the concept and then an automation challenge in python

Projects:

- Built a **MIPS1 CPU simulator (C++)**, a **C90 to MIPS Compiler (C++)** and a **C90 to Python translator (C++)**
- Built the backend (**RESTful API in Python**) of an app for identifying & aiding the recycling of rubbish on the street, **winning** the 2019 **Google BGN Hackathon**
- Developed real-time traffic sign detection software with a **Xilinx PYNQ-Z1 FPGA**, using **Vivado HLS & C**

Skills and Interests:

- Proficiency in **Python (PyTorch, NumPy, Pandas, Matplotlib, etc.)**, **C++, C** & **Arm Assembly**
- I have an interest in trivia and casual problem solving demonstrated by my participation and 3rd place position in the **Jane Street** CStimathon
- Frequently practice **Judo** (Brown belt), competing regularly in national competitions
- Member of the **Amos Bursary** which aims to enhance the professional careers of young black men through the provision of knowledge alongside academic, cultural and professional events
- Level 3 Personal Trainer and Spin Cycle Instructor
- Lover of all smooth, sexy, sultry music!! This includes RnB, Soul, Neo-Soul, Funk, etc…