

# Karl Kareem Melaimi

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## Education:

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Imperial College London

2018 - 2022

MEng Electronic and Information Engineering (Computer Engineering), 3<sup>rd</sup> year modules, Grade: 67.7%:

- Mathematics for Signals & Systems
- Machine Learning
- Deep Learning
- Advanced Signal Processing
- Real-Time Digital Signal Processing
- High level Programming (F#)
- Operations Research
- Accounting

Wembley High Technology College

2010 - 2017

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

## Relevant Work Experience:

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Aspect Capital, Investment Solutions & Research Intern

March 2021 - Oct 2021

Interned across the IS, Volatility Research and Systematic Global Macro teams.

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:

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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:

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- 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:

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- Proficiency in **Python(NumPy, Pandas, Matplotlib, etc.)**, **C++**, **C** & **Arm Assembly language**
- Invested in learning Statistical Learning outside of class by reading ISLR amongst others:
  - I aim to be experienced with statistical methods such as **linear models**, **multivariate analysis**, **stochastic processes**, and **sampling methods**.
- I have an interest in trivia and casual problem solving demonstrated by my participation and 3<sup>rd</sup> place position in the **Jane Street CStimathon**
- Interest in Data Science and Machine Learning, gained understanding through Cambridge Spark after being selected by **JP Morgan** to attend a 10-hour workshop
- 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