Zhang Naifu

 naifu-zhang-6544909a | funaizhang | funaizhang.github.io

SKILLS

PROGRAMMING	Python, C++, kdb+ q, bash, Linux, SQL
MATHEMATICS	Statistics, Calculus, Linear algebra, Stochastic processes, Graph theory

PROFESSIONAL EXPERIENCE

Qube Research & Technologies / Sep 2022 – Present | Singapore
Quantitative Researcher

Squarepoint Capital / Feb 2021 – Aug 2022 | Singapore
Quantitative Analyst
- APAC intraday production, backtesting, and monetisation
- Engineered new features in the firm's trading framework in C++
- Developed bespoke database and supporting library in KDB+ q for the desk

Barclays Investment Bank | Aug 2016 – Jul 2018 | London, UK
Macro Structuring
- Modelling, pricing, and backtesting of long-dated FX & Fixed-Income derivative products
- Used python, padla (in-house language) and excel for pricing and risk-management
- Conducted statistical and econometrical analysis to address business needs of clients, e.g. making inference and uncovering relationship between CMS spread and FX forward points

Goldman Sachs Inc | Apr 2014 – Apr 2014 | London, UK
Spring Week Intern

EDUCATION

Tsinghua University | Aug 2018 – Aug 2020 | Beijing, China
MSc Computing
- Courses: Machine Learning, Deep Learning, Algorithms, Computer Organisation, OS, Distributed Systems, Control Theory, Embedded Systems, Discrete Maths, Combinatorics, Stochastic Processes, Blockchain
- Machine learning project that used Partial CNN to decensor pixelation mask on human face images
- Implemented MLP, CNN, and RNN in python
- Implemented sharded distributed system based on raft protocol
- FPGA-based design and implementation of MIPS32 ISA processor
- GPA 3.79/4.00

University of Cambridge, St Edmund's College | Oct 2013 – Jun 2016 | Cambridge, UK
BA (Hons) Economics
- Elective courses: Econometrics, Mathematics and Statistics, Economic Theory and Analysis
- Final year dissertation applies the theory of Markov-switching GARCH model on USDCNH option volatility
- St Edmund's Tutorial Prize 2014 & 2015
- Class I 2014, Class I 2015, Class II.1 2016

Hwa Chong Institution | Jan 2005 – Dec 2010 | Singapore
- 7 A Level Distinctions; 2310/2400 in SAT I; 11 GCSE Distinctions

RESEARCH AND PUBLICATIONS

- Currently working on a technique to learn meaningful embeddings from continuous time series, such as stock prices, using ideas from Word2Vec and cointegration test
- Researched on building semi-autonomous robotic agent which can see, talk and act at Tsinghua University Intelligent Robotic Manipulation Lab
- **LEOC: A Principled Method in Integrating Reinforcement Learning and Classical Control Theory**, *N Zhang, N Capel,* Proceedings of the 3rd Conference on Learning for Dynamics and Control, PMLR 144:689-701, 2021
- **MQA: Answering the Question via Robotic Manipulation**, *Y Deng et al.*, arXiv:2003.04641 [cs.AI], 2020

SKILLS AND INTERESTS

SPORTS	Active marathoner; St Edmund's College rower, Blades in Lent Bumps 2016
MUSIC	Cello
SUBSCRIPTION	3Blue1Brown, Computerphile, TwoSetViolin, TechLead, Quanta magazine