

## Zhang Naifu

✉ naifuzhang@gmail.com | ☎ +65 96619283 | 📧 funaizhang | 🌐 funaizhang.github.io

### EDUCATION

**Tsinghua University** | Aug 2018 – Aug 2020 | Beijing, China

#### *MSc Advanced Computing*

- Courses: Machine Learning; Deep Learning; Algorithms; Computer Organisation; OS; Distributed Systems; Control Theory; Embedded Systems; Natural Language Processing; Multimedia Technologies; Discrete Maths; Combinatorics; Stochastic Processes
- Machine learning project that used Partial CNN to decensor pixelation mask on human face images
- Implemented MLP, CNN, and RNN without machine learning libraries, and word2vec with
- Implemented sharded distributed system based on raft protocol
- FPGA-based design and implementation of MIPS32 ISA processor
- Teaching Assistant for Combinatorial Mathematics Spring 2020
- 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

**Hwa Chong Institution** | Jan 2005 – Dec 2010 | Singapore

- 7 A Level Distinctions; 2310/2400 in SAT I; 11 GCSE Distinctions

### PROFESSIONAL EXPERIENCE

**Barclays Investment Bank** | Aug 2016 – Jul 2018 | London, UK

#### *Macro Structuring*

- Developed python and padla (in-house language) scripts to price, risk and backtest exotic, path-dependent option strategies
- Applied quantitative methods and 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
- Structured derivative strategies in the FX and Fixed Income asset classes as investment or hedging solutions for corporates, fintech, pension funds and asset managers

**Goldman Sachs Group Inc.** | Apr 2014 – Apr 2014 | London, UK

#### *Spring Week Intern*

**Singapore Armed Forces** | Feb 2011 – Dec 2012 | Singapore

#### *Medic*

### RESEARCH

**Tsinghua University** | Jul 2019 – Now | Beijing, China

#### *MSc Student*

- Undertaking research in efficient robotic control and learning methods based on Gaussian processes and continuous reinforcement learning, paper submitted to L4DC 2021
- Researched on question-answering based on UR5 robotic arm through imitation learning: '[MQA: Answering the Question via Robotic Manipulation](#)' coauthored with Assoc. Prof. Liu Huaping (Tsinghua University) & Prof. Sun Fuchun (Tsinghua University)

**Nanyang Technological University** | Jun 2016 – Jul 2016 | Singapore

#### *Research Assistant*

- Used MLP neural network to predict run-time of large number of jobs on commercial VMs (Azure, EC2 and GCE)
- Implemented 0/1 Knapsack algorithm to optimize run-time under budget constraint

### SKILLS AND INTERESTS

|                      |   |
|----------------------|---|
| <b>Languages</b>     | Fluent in English and Mandarin; Comfortable in python and C             |
| <b>Sports</b>        | Active marathoner; St Edmund's College rower, Blades in Lent Bumps 2016 |
| <b>Music</b>         | Cello   |
| <b>Subscriptions</b> | 3Blue1Brown, Computerphile, TwoSetViolin, TechLead, Quanta magazine     |