Shukai **Ni**

650-730-4795 | 9r0x@9r0x.com | https://9r0x.com/ | 9r0x

Education

Brown University *Providence, RI*

Data Science Sc.M. *Sep. 2022 -*

- Data Engineering, Statistical Learning, Deep Learning

Minerva University *Worldwide*

Computational Sciences & Business *Sep. 2018 - May. 2022*

- (Concentration) Applied Problem Solving
- (Concentration) Data Science and Statistics
- (Concentration) Strategic Finance
- GRE 338/340
- GPA 3.71/4

Research Projects

The IBM Qiskit Global Summer School *Remote*

Lectures & labs *July 2021*

- Explored Quantum Approximate Optimization algorithm and applications
- Analyzed Quantum Boltzmann Machines and Quantum Generative Adversarial Networks
- Performed lab experiments(scored 100%) on IBM Quantum platform

Correlation between Fama-French factors and business cycles *Remote*

Co-author with Arnav Sheth from MIT Concourse *June 2021 - PRESENT*

- Designed a curve inversion timing strategy with 10% CAGR
- Implemented a probit-based recession prediction model with 70% accuracy
- Experimentally validates correlation between FF factors and business cycles

Quantitative trading PaaS *Remote*

Full-stack development *Sep. 2020 - PRESENT*

- Developed benchmark tools based upon AMIRA and Prophet
- Designed UI&UX with quantified alpha/beta testing
- Implemented low latency APIs that allow high frequency trading via HTTP

ESG fund voting pattern research *Remote*

Data processing, with Arnav Sheth and Gita Rao from MIT Sloan *Feb. 2021 - Mar. 2021*

- Designed a multi-thread crawler to acquire voting records from SEC EDGAR database
- Filtered and analyzed data using regular expression

Re-examine recessional velocity based upon a 'variable' Hubble constant *San Francisco, United States*

Literature review & Data analysis *Nov. 2018*

- Provided a unified framework for existing theories and explanations
- Quantified recessional velocity index using linear regression

San Francisco rising sea level monitoring and prognosis *San Francisco, United States*

Data collection & Analysis *Dec. 2018*

- Extensively sampled sea level and ecological data along San Francisco coastline
- Validated results with ex ante probit model based upon historical data
- Performed a case study with SFO's designers on city planning

Internship Experiences

Chongqing International Trust *Wuxi, China*

Asset management assistant *July. 2021*

- Diagnosed project finance risks based upon macroeconomics policies
- Analyzed and validated Snowball derivatives using Monte Carlo knock-in/out options

Addor Capital   *Nanjing, China*

Service industry investment assistant   *May. 2021 - Jun. 2021*

- Identified fraud risks during financial due diligence
- Quantified and analyzed Cyber Range industry performance using DCF and linear regression

Shunzhi Tech Inc.   *Nanjing, China*

Project manager & Model developer   *Jun. 2020 - Sep. 2020*

- Designed a change detection model on VHR satellite pictures(34% better than benchmark)
- Implemented real-time video stream object detection project
- Heterogeneous computing analysis and development on multiple service providers

Consulting with Frauenmond, TBM Inc.   *Seoul, Korea*

Consultant   *Oct. 2019 - Dec. 2019*

- Analyzed Korean chocolate market with Porter's Five Forces Model and managerial accounting
- Strategized with Encouragement Study based on Genetic Matching and Regression Discontinuity
- Offered Neural Network model for Alpha/Beta tests on feature designing

Project Safe Francisco with Gensler Inc.   *San Francisco, United States*

Project manager & Coder   *Sep. 2018 - May. 2019*

- Developed a San Francisco simulation game, chosen as showcase project
- Scripted game events based on interviews and surveys
- Continuous intergration with Gensler Inc. and their architecture designing team

Nine Chapter Inc.   *Shanghai, China*

Web developer & Component designer   *Aug. 2017 - Nov. 2017*

- Streamlined frontend building process
- 20x speedup for project building with caching design
- Bridged major front-to-back communications & REST API design

Skills

- **Expert:** Python, *nix, React.js, Git, Matlab

- **Proficient:** SQL, R, Burp Suite, Docker, CI, Heroku

- **Intermediate:** TensorFlow, C/C++, Dask, Redis