

Education

Brown University

DATA SCIENCE SC.M.

- Computational Probability and Statistics, Deep Learning, Software Security and Exploitation...

Providence, RI

Sep. 2022 - Present

Minerva University

COMPUTATIONAL SCIENCES & BUSINESS

- (Triple Majors) Data Science and Statistics, Applied Problem Solving, Strategic Finance
- Capital Allocation and Value Creating Growth, Global Enterprise Financial Strategy, Accounting...
- Data structure, Linear optimization, Machine learning and decision making, Bayesian statistics...
- GPA 3.8/4(Top 5%)

Worldwide

Sep. 2018 - May. 2022

Research Projects

Chemical Molecular Energy Optimization

MACHINE LEARNING & COMPUTATION

- Analyzed traditional Hartree-Fock and DFT methods with Gaussian
- Implemented the original data pipeline on Brown's Oscar super computing cluster with 200x speed
- Working on an efficient Belief Propagation network based on HMC

Providence, RI

Aug 2022 - Present

The IBM Qiskit Global Summer School

LECTURES & LABS

- Explored Quantum Approximate Optimization algorithm and applications
- Analyzed Quantum Boltzmann Machines and Quantum Generative Adversarial Networks
- Experimented(scored 100%) various Quantum Machine Learning algorithms on IBM Quantum platform

Remote

July 2021

Correlation between Fama-French factors and business cycles

SECOND-AUTHOR WITH DR.ARNAV SHETH(MIT)

- 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

Remote

June 2021 - PRESENT

Quantitative trading PaaS

FULL-STACK DEVELOPMENT

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

Remote

Sep. 2020 - PRESENT

ESG fund voting pattern research(published)

DATA PROCESSING, WITH ARNAV SHETH AND GITA RAO FROM MIT SLOAN

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

Remote

Feb. 2021 - Mar. 2021

Re-examine recessional velocity based upon a 'variable' Hubble constant

LITERATURE REVIEW & DATA ANALYSIS

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

San Francisco, United States

Nov. 2018

San Francisco rising sea level monitoring and prognosis

DATA COLLECTION & ANALYSIS

- 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

San Francisco, United States

Dec. 2018

Internship Experiences

Elle Investments

FULL STACK DEVELOPMENT

Remote, US

May, 2022 - PRESENT

- Full stack web application development for high bandwidth trading data solution
- Identified and fixed SQL injection vulnerabilities and redesigned MVC+OOP stateless deployment framework
- Implemented dynamic HTTP cache that increased concurrency by 1000+x
- Low-level persistent storage design that saved 20% write time, 40% read time, and 45% RAM

Chongqing International Trust

ASSET MANAGEMENT ASSISTANT

Wuxi, China

July, 2021

- Diagnosed project finance risks based upon macroeconomics policies
- Examined consumer investment strategies under different assumptions through quantitative research
- Analyzed and validated Snowball derivatives using Monte Carlo knock-in/out options

Addor Capital

SERVICE INDUSTRY INVESTMENT ASSISTANT

Nanjing, China

May, 2021 - Jun, 2021

- Prepared, recorded, analyzed, and presented with in-person and virtual interviews
- Identified fraud risks with in-depth research report before financial due diligence
- Quantified and analyzed Cyber Range industry performance using DCF and linear regression

Shunzhi Tech Inc.

PROJECT MANAGER & MODEL DEVELOPER

Nanjing, China

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.

CONSULTANT

Seoul, Korea

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.

PROJECT MANAGER & CODER

San Francisco, United States

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.

WEB DEVELOPER & COMPONENT DESIGNER

Shanghai, China

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

- GRE 338/340
- **Proficient:** Python, *nix, PHP, React.js, Git, Matlab, Photoshop
- **Intermediate:** SQL, R, Burp Suite, Docker, Heroku, MS Office
- **Beginner:** TensorFlow, C/C++, Dask, Redis