

## Education

### Brown University

GPA 4.0/4.0 - Providence, RI

DATA SCIENCE/COMPUTER SCIENCE, M.Sc.

Sep. 2022 - May. 2024

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

### Minerva University

GPA 3.8/4.0(Top 5%) - Worldwide

COMPUTATIONAL SCIENCES &amp; BUSINESS, B.Sc.

Sep. 2018 - May. 2022

- (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...

## Skills

<b>Programming</b>	Python, C, PHP, SQL, R, MatLab
<b>Web</b>	HTML/CSS/JavaScript, React.js, Bootstrap, jQuery, Flask, Django
<b>Tech Stacks</b>	Kernel, TensorFlow, Docker, Kubernetes, Redis, Kafka, *nix, Pandas, Scrappy
<b>Tools</b>	MS Office, Tableau, Git, LaTeX, Jupyter, Terraform, AWS, GCP, Ansible
<b>Languages</b>	English (Fluent), Mandarin (Native)

## Tech experiences

### Bank of America

Charlotte, US

(INTERN) CORPORATE AUDIT: DATA AUTOMATION AND TECHNOLOGY

May. 2023 - Aug. 2023

- Implemented audit testing coverage through streamlining protocols, leading to 25% time savings
- Visualized coverage statistics through Python and Alteryx, delivering analysis to senior directors
- Developed high-concurrency data workflows for SQL and NoSQL databases

### Brown Secure Systems Lab

Providence, US

(RESEARCH) PER-PROCESS SYSTEM CALL FILTERING AND KERNEL DEVELOPMENT

Jan. 2023 - PRESENT

- Developed an advanced log-time syscall filtering application using seccomp BPF, resulting in improved system efficiency
- Customized Linux kernel 6.0.8 compilation, integrating arity-based filters for enhanced performance
- Designed versatile syscall handlers for policy-driven binaries, enabling flexibility and streamlined execution

### Elle Investments

Remote, US

(INTERN) FULL STACK WEB APPLICATION DEVELOPMENT FOR HIGH-PERFORMANCE TRADING DATA SOLUTION

May. 2022 - Dec. 2022

- Overhauled a low-level persistent storage saving 20% write time, 40% read time, and 45% RAM, increasing overall performance
- Addressed SQL injection vulnerabilities and restructured MVC+OOP stateless deployment framework to strengthen security measures
- Implemented a dynamic HTTP cache that increased concurrency by 1000x, significantly enhancing the overall user experience

### The IBM Qiskit Quantum Computing

Remote

(RESEARCH) QUANTUM MACHINE LEARNING LAB EXPERIENCES ON CUTTING EDGE MODELS

July 2021 - Aug. 2021

- Investigated practical applications of Quantum Approximate Optimization Algorithm, optimizing solutions for complex problems
- Conducted in-depth analysis of Quantum Boltzmann Machines, driving advancements in data generation and quantum computing

### Correlation between Fama-French factors and business cycles

Remote

(RESEARCH) SECOND-AUTHOR WITH DR.ARNAV SHETH(MIT) ON A PAPER ABOUT CURVE INVERSION TIMING STRATEGY

June 2021 - PRESENT

- Developed a probit-based recession forecasting model, achieving 70% accuracy, which contributed to a 10% annualized return
- Analyzed business cycles through Fama-French factors using ex-ante and ex-post evaluation methods, confirming the model's validity

## Finance Projects

### Chongqing International Trust

Wuxi, China

(INTERN) ASSET MANAGEMENT ASSISTANT FOR QUANTIFIED FINANCIAL PRODUCT RESEARCH

July. 2021

- Conducted in-depth risk assessments influenced by macroeconomic policies, optimizing investment security
- Evaluated consumer investment strategies through data-driven research, adapting to diverse economic scenarios
- Streamlined analysis and validation of Snowball derivatives employing Monte Carlo simulations for knock-in/out options, enhancing accuracy and efficiency

### ESG fund voting pattern research(published)

Remote

DATA PREPROCESSING AND ANALYSIS WITH ARNAV SHETH AND GITA RAO(MIT SLOAN)

Feb. 2021 - Mar. 2021

- Developed a multi-threaded web crawler for extracting voting records from the SEC EDGAR database, leading to faster data acquisition and reduced processing time
- Implemented a universal data pipeline using regular expressions for accurate filtering and analysis, streamlining the data processing workflow and enhancing output quality