JERRY PAN

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EDUCATION

University of California, Berkeley August 2020 - June 2023
Double Major in Computer Science, Statistics Cumulative GPA: 3.972
Relevant Coursework: Multivariable Calculus, Linear Algebra & Differential Equations, Convex Optimization, Functional Programming, Data Structures & Algorithm, Computer Architecture, Discrete Mathematics and Probability Theory, Data Science, Probability Theory, Advanced Statistical Programming, Efficient Algorithms and Intractable Problems, Software Engineering, DeepLearning.AI

INTERNSHIP & RESEARCH EXPERIENCE

Sophon Tech - HFI.one & HYFI.pro Beijing, China
Software Engineering Intern *May 2021- July 2021*

- Deployed auto-compounding algorithm and value-locking in smart contracts in Solidity.
- Fixed the front-end annual percentage rate bouncing by designing a delayed time-weighted algorithm for profit calculation.

University of Cambridge - Behavioral and Clinical Neuroscience Institute Cambridge, UK
Visiting student, undergraduate researcher *Dec 2020 - present*

- Trained Hidden Markov Model to segment multivariate time series into states that are characterised by their unique quasi-stationary spectral properties in the context fMRI and EEG.
- Statistically inferred the consciousness state by processing experimental neuroscience data, including fMRI and EEG.

Stanford University Biology Department - Fraser Lab Stanford, CA
Research Intern (Genomics Research Internship Program at Stanford) *July 2019 - August 2019*

- Analyzed 56 metagenomics *Citrobacter rodentium* samples over 200GB by applying Peak-to-Trough Ratio Algorithm in "Growth Dynamics of Gut microbiota".
- Conducted advanced statistical analysis methods on bacterial colony and illustrated the statistical significance of experimental results and trends with visualization tools.
- Built a pipeline in Nextflow to connect individual command-line genome assay modules, including Glimmer 3, Sickle 1, and Bowtie 2, to effectively parallelize computation on clusters.

ExTrade Capital Management Shenzhen, China
Quantitative Research Intern *July 2018 - August 2018*

- Applied cryptocurrency trading algorithms using Markov Chain process, Itō drift-diffusion process, and Stochastic differential equation, leading to 57% profitable trades in high-frequency environment.
- Contextualized parameters put forward in Ho & Stoll's paper "Optimal Dealer Pricing" in the context of crypto market and statistically inferred coefficients for stochastic transactions and stochastic returns.

PROJECTS

Financial Data Visualization for Prop Trading (React.js, AWS, S3.js) August 2021

I collaborated with other members in FinTech@Berkeley to create a financial trading data visualization website for testing other trading strategies ins & outs.

Full-stack Blockchain Deployment (Node.js, Redis, Express API) May 2021

I collaborated with my roommate to deploy a blockchain platform from the scratch in test-driven development, including PoW, API and network broadcasting, digital wallet & transactions, mining.

TECHNICAL STRENGTHS

Languages Python, Java, R, MatLab, Unix/Linux, SQL, HTML/CSS/JavaScript
Technologies Git, Node.js, React.js, Express, MongoDB, Redis, Django, Wagtail

ADDITIONAL INFORMATION

IEEE UC Berkeley Student Branch September 2020 - present

IEEE National Member September 2020 - present

BCAIA Scholarship - awarded $23750 for the 2020-2021 academic year

UC Berkeley Statistics Undergraduate Student Association Member September 2020 - present

Languages: Chinese (native) and English (bilingual)

Interests & Hobbies: Bodybuilding, Half-Marathon, Swimming, Outdoors, Chess, Jazz drum, Investment