JERRY PAN

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EDUCATION

University of California, Berkeley August 2020 - June 2023
Triple Major: Computer Science, Statistics, and Cognitive Science Cumulative GPA: 3.96
Relevant Coursework: Multivariable Calculus (MATH 53), Linear Algebra & Differential Equations (MATH 54), Computer Program Structures (CS 61A), Data Structures & Algorithm (CS 61B), Discrete Mathematics and Probability Theory (CS 70), Data Science (DATA 8), Probability Theory (STAT 140), Advanced Statistical Programming (STAT 33B)

INTERNSHIP & RESEARCH EXPERIENCE

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

Social Network for Developers.

This project aims at forming a social network for software technology developers. (DevConnector)

TECHNICAL STRENGTHS

Languages	Python, Java, R, MatLab, Unix/Linux, C, Scheme/Lisp
Technologies	Excel/VBA/Macros, SQL, LaTeX, Git
Web Stack	HTML/CSS/JavaScript, Node.js, React, MongoDB, Redux

ACADEMIC ACHIEVEMENTS

- BCAIA Scholarship - awarded $23750 for the 2020-2021 academic year
- IEEExtreme Programming Contest - Ranked 418 among 3700+ participants, including graduate students and professional programmers