

# RAYMOND

# YANG

## DATA SCIENTIST

✉ raymond.yang@berkeley.edu

☎ (415) 937-4285

📍 San Jose, CA

in rjyang

🌐 yangraymond

## Skills

### LANGUAGES

Python

Java

SQL

Ruby

C

JavaScript

VBA

### INDUSTRY/CONCEPTUAL

Quantitative Research

Time Series Analysis

Deep Learning

Data Pipelining

Excel

NLP

Recommendation Systems

Tableau

Latex

Competitive Math

Bloomberg Terminal

## Passions

Photography

Poker

Strategy Games

Teaching

Piano

Credit Card Churning

## Education

University of California, Berkeley

May 2017

B.A. Computer Science

Coursework: Machine Learning, Deep Unsupervised Learning, Algorithms (Instructor), Artificial Intelligence, Databases

## Employment

### Metis

San Francisco, CA

#### *Data Scientist*

June 2020 - Present

- Designed a new framework for generating adversarial examples using generative adversarial nets. Achieved higher attack success rates than iterative FGSM for any amount of perturbation in the white-box setting
- Researched a profitable betting strategy on regular-season NBA games using boosted trees on sports odds/data. Achieved a P/L of \$8.5k (9% ROI) over the 2019-20 season
- Developed an advice recommender using LDA and word embeddings that greatly outperformed Reddit's "Relevance" search function in advice-seeking communities

### Crypterterminal

San Francisco, CA

#### *Software Engineer*

Feb. 2019 - Apr. 2020

- Built a centralized crypto-investment platform from the ground up, offering a research and execution environment across 20+ cryptoassets
- This was undertaken while providing care for a close family member who had fallen ill

### Old Mission Capital

Chicago, IL

#### *Quantitative Researcher (Data Scientist)*

Sept. 2017 - July 2018

- I led the quantitative research efforts on the index options market-making desk, specifically researching and productionizing new machine learning methods to accurately price and optimally trade a variety of financial instruments. Some of my projects revolved around pattern extraction in low SNR, nanosecond-resolution time series data, while others were concerned with optimizing the computational performance of existing models and techniques. I also mentored a successful team of interns which resulted in several full-time hires.
- Due to the nature of the work, I have redacted project descriptions for privacy. Please reach out for further details.

### GamesCrafters

Berkeley, CA

#### *Researcher - Computational Game Theory*

Jan. 2017 - May 2017

- Developed a distributed algorithm to solve and play abstract strategy (combinatorial) games
- Researched new methods to alleviate heavy communication loads between actors in the distributed game solver

### Old Mission Capital

Chicago, IL

#### *Quantitative Trading Intern*

June 2016 - Aug. 2016

- Analyzed low-latency SPY/ES arbitrage as a potential trading opportunity; applied several time series methods to infer competitor trading patterns; proposed a method to estimate covariances in ultra-low-latency, asynchronous time series data
- Researched a novel way to trade the Dow 30 stocks under infrastructural constraints using a modified Kalman Filter, achieving an annualized sharpe of 4.1. [Paper]
- Attended seminars on ETFs, poker, and game theory; shadowed traders during market hours through weekly desk rotations
- Algorithmically traded mock futures using a random forest model in a firm-wide tournament; built an electronic exchange as a prerequisite

### Berkeley Institute for Data Science

Berkeley, CA

#### *Researcher - Latency Arbitrage*

Jan. 2016 - May 2016

- Researched the extent of queue-jumping and stale-quote arbitrage in private (dark) exchanges
- Developed and published a Python library around Blaze, Dask, and Pytables to efficiently process and perform operations on microsecond-resolution TAQ data
- Applied a regression discontinuity design to model 800 securities that traded near the \$1.0 cutoff between 2011 and 2014

## Projects

### Fluint (European Innovation Academy Growth Accelerator '15)

- Co-founded a startup connecting travelers to an online marketplace for peer-to-peer foreign currency exchange at the midmarket rate
- Mobile apps released in closed beta with > 1k daily users

## Awards

### Mathematical Association of America · AIME Qualifier

2012

Top 2-5% nationally in the American Mathematics Competition for two consecutive years