Jerry Sun

qjsun@berkeley.edu ◇ LinkedIn: qjsun ◇ Github: jerrys7 ◇ Berkeley, California

EDUCATION

University of California, Berkeley — August 2020 – May 2024

Bachelor of Arts – Computer Science and Environmental Science

Selected Coursework: Forecasting, Discrete Math, Statistical Probability, Random Processes, Efficient Algorithms & Intractable Programs, Machine Learning, Artificial Intelligence, Linear Optimization

Activities: Teaching Assistant: CS 188 Artificial Intelligence, Biometeorology Lab, Berkeley Consulting

WORK EXPERIENCE

Susquehanna International Group — June 2023 - August 2023

Quantitative Trading Intern
- Engaged in a 10-week options theory course refining knowledge of options theory, volatility, and Greeks.
- Participated in mock trading and gaming exercises to practice managing positions and decision-making.
- Shadowed the index volatility desk, learning to trade and manage risk in response to market changes.
- Visualized and computed injections and decays in variance, beta, and correlation among various foreign exchange currency pairs following significant macro events to help FX traders pinpoint areas of focus.

Smartsheet — May 2022 - Aug 2022

Software Engineering Intern
- Reduced overloading by 35% by identifying 7 key indicators over stages of the blueprint creation process
- Devised a mathematical formula to calculate blueprint health to decrease blueprint latency by 24%
- Developed efficient and robust data-processing infrastructure in Ruby using the Smartsheet Cloud API
- Created user-friendly UI to integrate tool into existing dashboard for the use of over 2 million users
- Wrote a series of comprehensive, thread-safe, unit tests to detect the edge-case blueprint usage scenarios

Children's International — August 2022 - Present

Machine Learning Consultant
- Conducted sentiment and topic modeling on 20,000 letters with BERT, LDA, and Bayesian learning
- Developed a CI/CD system to monitor data extraction of sponsor letters and invalid data fields
- Created a customizable data visualization tool to graph 50+ key statistics, insights and distributions

Harvard Kennedy School - Dr. Calder Walton — April 2020 – September 2020

Research Assistant
- Performed OCR with Google Cloud Vision on a 1.2 million word dataset of British intelligence dairies
- Engineered a SNA model to determine and graph corresponding agent relationships in Gephi

PROJECTS

Breaking the Spring Barrier: Forecasting El Nino with an Improved ENSO Index

- Leveraged TensorFlow and Seaborn to derive weights of various atmospheric, environmental features.
- Forecasted the magnitude of El Nino 12 months in advance with logistic regression to a 68% accuracy

A Machine Learning Analysis of the Features in Deceptive and Credible News

- Collaborated with Prof. Maite Taboada and Dr. Fatemeh Asr on a fake news classification project
- Developed a KNN classifier to determine news validity based on linguistic features at 83% accuracy.

SELECTED ACADEMIC ACHIEVEMENTS

- **International Geography Olympiad** - Bronze Medal (2019), National Winner (2019, 2020)
- **IISEF Team Canada Top 30** - Fake News Detection (2019), El Nino Forecasting (2020)
- **American Invitational Mathematics Exam** - Top 2.5% participants (2018, 2019, 2020)

PROGRAMMING LANGUAGES AND SOFTWARE

Java, Python, HTML, CSS, MATLAB, R, C++, Ruby, Node.js, SQL, JavaScript LaTeX, AWS, Git