Edward Zhang

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EDUCATION

DUKE UNIVERSITY **Durham, NC**
A.B. in Mathematics
B.S. in Computer Science GPA: 4.0
Minor: Finance | **Coursework:** Probability, Conjecture & Proofs, Mathematical Finance, Global Capital Markets

CORNELL UNIVERSITY **Ithaca, NY**
Candidate for B.S. in Applied Economics and Management
Intended Minors: Computer Science, Mathematics GPA: 4.155
Coursework: Multivariable Calculus (A), Linear Algebra (A+), Object-Oriented Programming and Data Structures (A)

PROFESSIONAL EXPERIENCE

CATERPILLAR, INC. **Peoria, IL**
Incoming Engineering Intern (Co-Op) September 2023 – May 2024
Data Science Intern – Finance Services Division May 2023 – August 2023
- Developed neural network and Naïve-Bayes algorithm for invoice classification to reduce timeframe by 50%
- Forecasted incoming supplier volume using GARCH model for more efficient contract turnaround time year-round
- Worked with FX/Commodities desks to analyze market and macroeconomic effects on purchasing and procurement

DYAD (DYADSTABLE.COM | 𝕏.COM: @0XDYAD) **San Francisco, CA**
Software Developer Intern, Quantitative Analyst Intern August 2022 – December 2022
- Utilized Monte Carlo simulations to design protocol algorithms for $DYAD, a cryptocurrency pegged to US dollar
- Constructed valuation models using Ethereum volatility to forecast DYAD NFT prices for 10+ VC firms and investors
- Developed simple user interface and Smart Contracts, helping protocol to achieve $60k TVL with minimal gas fees

JANE STREET CAPITAL **New York City, NY**
Student – Academy of Mathematics and Programming July 2022 – August 2022
- Selected from 300+ applicants; took classes in computer science, number theory, and probability & statistics
- Utilized PID controller to create an algorithmic trading bot ranked #2 in the AMP Electronic Trading Competition
- Created Wordle solver using Shannon Entropy concepts with an average of 3.63 guesses and <1% failure rate

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN **Champaign, IL**
Financial Engineering Research Intern – Grainger College of Engineering June 2021 – September 2021
- Produced 4 case studies on significant financial events including the Barings Bank collapse and Louisiana Purchase
- Utilized Longstaff-Schwartz method and least-squares Monte Carlo simulation to derive underlying asset price paths
- Implemented Newton-Raphson method to estimate asset implied volatility in conjunction with Black-Scholes model

LEADERSHIP EXPERIENCE

SINGULARITY CAPITAL **Chicago, IL**
Founder, Director of Research January 2023 – May 2023
- Created proprietary back-testing and portfolio analytics dashboard with MERN stack to manage fund's $15,000 AUM
- Designed cryptocurrency triangle arbitrage strategy using Kalman filter identification in Binance exchange data
- Trained hidden Markov Model for equity trading algorithm utilizing multiple factor models (CAPM, Fama-French, APT)

CORNELL QUANT FUND **Ithaca, NY**
Director – Derivatives Desk, Quantitative Analyst – Blockchain Desk September 2022 – May 2023
- Selected from 150+ applicants; participated in 10-week education program in financial assets and trading strategies
- Implemented delta-hedging options strategy to win the Cornell Trading Competition against 20 teams from 12 schools
- Developed correlation trading algorithm for 20 small-cap cryptocurrencies using sentiment analysis of Twitter posts

SKILLS & INTERESTS

Languages/Tools: *Proficient:* Java, OpenCV, Python, Pandas, React; *Introductory:* C++, OCaml, Vyper, Solidity, Kotlin
Applications: Solidworks, Autodesk Inventor, MS Office, Power BI, MS Azure, AWS, Adobe CC, Android Studio
Interests: Chess, Formula One, Premier League, Satirical Films, Graphic Design, Table Tennis, Golf, Fitness, Poker