XANDER M. ROBBINS

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EDUCATION

University of Florida, College of Liberal Arts and Sciences — **Gainesville, FL**
Bachelor of Arts in Mathematics & Economics, minor in Computer Science — **Aug 2024 – Dec 2026**

- ***GPA: 4.0****(Upper-Division)* **| *3.6****(overall)* **| *Graduating at 19***

Relevant Coursework: Complex Analysis, Monte Carlo Simulations, Operating Systems, Data Structures & Algorithms, Probability Theory, Linear Algebra, Discrete Math, Abstract Algebra, Game Theory

EXPERIENCE

AlgoGators Quantitative Investment Fund — **Gainesville, FL**
Director of Quantitative Research — **Mar 2026 – Present**

- Directed 20 QR's across volatility modeling, backtest overfitting diagnostics, and macro regime analysis
- Validated research pipeline reducing backtested fund volatility by 7% and improving annualized returns (10→12%)
- Managed $500,000 in live capital, directing risk management frameworks and systematic strategy development across equities, commodities, and FX

Senior Analyst — **Jan 2025 – Mar 2026**

- Built quantitative models analyzing macro trends that improved prediction accuracy for portfolio positioning/sizing
- Backtested and deployed 3 live systematic strategies across commodities and FX with average Sharpe ratio of 1.6+
- Managed $100,000+ in live capital across self-made systematic trading strategies, overseeing risk & position sizing

University of Florida — **Gainesville, FL**
Head Teaching Assistant for Discrete Structures — **Mar 2026 – Present**

- Lectured probability theory, Markov inequalities, Gambler's Ruin, and stationary distributions to 200+ students daily
- Developed formal proof-writing curriculum covering discrete math, stochastic reasoning, and algorithmic analysis
- Co-designed course syllabus and full topic sequence from scratch, covering 40+ modules spanning Bayes' Theorem, Random walks, combinatorics, and graph theory

QuantED — **Gainesville, FL**
Senior Lecturer — **Dec 2025 – Present**

- Collaborated directly with John C. Hull to help better teach options, futures, and other derivatives to undergraduates
- Designed and delivered lectures on quantitative finance, probability, statistics, and mathematical modeling
- Mentored students in algorithmic trading, data analysis, and research projects using Python, pandas, and NumPy

Gator QuantHacks — **Gainesville, FL**
Vice President — **Feb 2026 – Present**

- Founding VP of the Southeast U.S.'s only major quantitative finance hackathon, October '26, targeting +500 students
- Designed competition tracks spanning systematic trading, ML-driven risk models, and probability/combinatorics
- Gained sponsorships from QuantConnect, Major League Hacking, OldMission , and Jane Street

PROJECTS AND RESEARCH

Adaptive Strategy-selected Variance Reduction for Monte Carlo Option Pricing (*Research*) — **Oct 2025 – Present**

- Developed adaptive thread allocation system to dynamically test and select optimal variance reduction technique
- Benchmarked across 8 exotic option classes; ASVR achieves up to 7.45× MSE reduction vs. plain MC
- Proved oracle-gap theorem bounding excess MSE at O(K log N/N) and derived a Bayesian inverse-variance fusion estimator that outperforms pure exploitation on 6 of 8 option types

NASA POWER API Commodities Trading Strategy — **Dec 2025 – Mar 2026**

- Developed a satellite-driven ag futures strategy using climate data and Ridge regression to forecast 10-day returns
- Engineered rolling stress indicators with z-score normalization and PCA, fed into a walk-forward Ridge Model
- Backtested on corn futures (ZC=F, 2010–2023) achieving 15–20% annualized return, 1.2–1.8 Sharpe, and 54–58% win rate with 10 bps/side transaction costs

SKILLS

- **Programming:** Python (pandas, numpy, scipy, statsmodels, scikit-learn), C++ (STL, multithreading), R, Git, CMake