Lucca Forrest

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Education

University of North Carolina at Chapel Hill   2023-2027
B.A. Computational Physics & B.S. Applied Mathematics – GPA: 4.0
Club Tennis | Velocity Capital Trading Club

Oxford University – Visiting Student   2025-2026
Physics & Mathematics | Mingos Charter Scholarship

Experience

nVerses Capital – *Quantitative Research Intern*   May-July 2025
Researched unsupervised equity K-Means clustering methods using Axioma risk factors, experimenting with blended optimization functions (gap, silhouette, Calinski-Harabasz, inertia, day-over-day equity churn), lookback windows, hyperparameter tuning, K-selection, seeded vs. unseeded continuity, and a custom temporal split-and-merge algorithm to develop alternative groupings for z-scoring and feature engineering. Built analytics infrastructure to detect vendor data anomalies and ensure data integrity across feed types. Gained exposure to alpha generation workflows, including predictive modeling (OLS, Lasso, Ridge), envelope models, and lookahead bias analysis. Studied constrained mean-variance optimization under risk, turnover, implementation lag, locates, and trading frictions, with a focus on aligning predictive signals with portfolio construction objectives.

Dark Forest Technologies – *Quantitative Research Intern*   May-Dec 2024
Engineered Google Cloud data pipelines for alpha-driven algorithmic trading research with high-volume data. Developed automated file handling systems, incorporating synthetic variable interactions, residuals, and covariances to structure raw market data for portfolio simulations, with a focus on scalability.

City, University of London – *Computational Modeling Research*   2021-2023
"A Quantitative Regression and Volatility Analysis of the Relationship Between Economics and Political Stability," published in the 2024 University of Chicago $E=mc^2$ Mathematical Science Journal. Named a 2023 International Regeneron Science Talent Search Scholar ($2,000 award) and awarded 1st Place in Mathematics at the 2023 WSEF.

Concentric Capital Strategies – *Summer Analyst*   July-August 2023
Headed two daily technical short baskets: $12m value and 500 intraday equities each. Secured Oddity Tech IPO allocation via Goldman: +35% on first trade to $49 (PT: $50). Bloomberg API, Erlanger Type 1/4, and earnings trade short squeeze research.

G2 Investment Partners – *Summer Analyst*   May-July 2023
Small-cap gap momentum tech research: Integrated insights from conferences and direct meetings with company management teams into valuation forecasts, including revenue, EBITDA, and EPS projections.

Highline Capital & AREX Capital Management – *Summer Intern*   May 2023
Equity research and financial modeling, integrating income statement, balance sheet, and cash flow.

Catalur Capital Management – *Summer Intern*   June-August 2022
Capital account matrix tracking system, risk exposure analytics, and performance attribution reporting.