Chase U.

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Education

University of Maryland **College Park, MD, USA**
Master of Quantitative Finance, GPA: 3.94 *Aug 2023 – May 2025*

- Secured 1st place and $1,000 prize in a school-wide stock pitch competition.
- **Co-President**, Smith Master's Finance Association: Organized Bloomberg bootcamp, career panel for 50+ peers.
- **Equity Research Analyst**, Mayer Fund: Managed consumer staples sector for the $8.5M student-run fund; drove 2 buy decisions out of 4 pitches through detailed DCF and comps based valuation with 15%+ potential upside and long term value.

Indian Institute of Technology Bombay **Mumbai, India**
Bachelor of Science in Economics, GPA: 3.60 *Aug 2019 – May 2023*

- Top 0.2% in JEE 2019, All India Rank below 1500 out of 1M+ candidates in India's toughest entrance exam.
- Minor in Machine Learning and Data Science; Coursework: Econometrics, Game Theory, Macro Economics.

Professional Experience

Quantitative Risk Analyst **College Park, MD**
Experiential Learning Project, **Arch MI** *Mar 2024 – May 2024*

- Integrated and processed 100M+ Freddie Mac and Fannie Mae loan records using Python, yielding dataset of 1M defaulted loans.
- Led the integration of FEMA NRI data with 1M GSE loans at zip3-level granuality, using deciles-bins to retain risk dispersion.
- Developed 2 stage model: logistic regression to classify foreclosure alternatives (AUC-ROC 0.81 vs 0.78 without climate factors) followed by OLS for LGD, confirming natural-hazard risk elevated mortgage losses.

Market Risk Analyst **Mumbai, India**
IndusInd Bank *May 2022 – Jul 2022*

- Implemented valuation models in Excel, computing sensitivities for 7+ financial instruments to assess portfolio market risk.
- Aggregated market risk exposure across portfolios calculating the capital requirements under the updated Basel III framework.
- Identified regulatory impact on Indian banks' capital requirements projecting 10% increase needed to maintain compliance.

Academic Projects

Quantitative Investment Strategy
Guide: Prof. Russel Wermers *Oct 2024 – Dec 2024*

- Extracted 50 factors, including a Prospect Theory–based one, from 30+ years of CRSP/WRDS, cleansed and imputed data, included delisted firms to correct survivorship bias, and built 6 and 12 month forward return targets.
- Backtested investment strategies across different market regimes, identifying long-only approach that achieved 458% cumulative return; 2.2x benchmark performance; Sharpe 0.30 vs 0.21 of market benchmark.

Portfolio Analytics
Guide: Prof. George Gao *Aug 2024 – Oct 2024*

- Built risk management dashboard, analyzing sector allocation, factor attribution, and risk contributions for the Mayer Fund.
- Quantified return attribution using Brinson and multi-factor models; evaluated performance drivers and style consistency.

Financial Mathematics
Guide: Prof. Mark Loewenstein *Mar 2024 – May 2024*

- Priced vanilla and exotic options (Asian, shout) using binomial, trinomial Trees and Monte Carlo models.
- Analyzed convergence of tree-based methods against analytical Black-Scholes price to match prices within $0,01(penny accuracy).
- Modeled stochastic volatility and Merton jump diffusion to capture volatility smiles and discontinuous price jumps.

Other Projects

Portfolio Management, *Prof. Mark Loewenstein* *Aug 2024 – Oct 2024*

- Evaluated 5+ portfolio management strategies (including AQR's momentum fund and ProShares hedge fund replication ETF); Optimized investment strategies to improve sharpe ratio under varying risk constraints.

Bond Portfolio Management, *Prof. Haluk Unal* *Jan 2024 – Mar 2024*

- Constructed a bond portfolio worth $100K using zero coupon Treasury bonds for 7-week investment horizon, diversifying across maturities, managing interest rate risk; applied forward curve analysis and theta/price ratio for security selection.

Financial Programming, *Prof. Alex He* *Jan 2024 – Mar 2024*

- Modeled Russell 2000 volatility using AR-GARCH and analyzed crypto survival using Cox models to quantify risk.

Technical Skills

- **CFA Level 2 candidate**
- Python (pandas, NumPy, scikit-learn, statsmodels), SQL, Stata Git; Bloomberg, WRDS, LSEG Refinitiv; MS Excel
- OLS & Logistic Regression, Random Forest, Deep Learning, AR-GARCH, DCF Valuation, Monte Carlo Simulations

Extracurriculars

- Developed Trivariate Probit model with selection (n=72K) to estimate caste disparities in hypertension awareness, using Stata.
- Guided 3 student teams through in-depth option pricing analysis, fostering understanding of equity derivatives valuation tools.
- Conducted behavioral finance research under ISB, building gamified survey platform to test disparity-reduction techniques.