Scott T. Merrill, CFA, FRM

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EDUCATION

University of North Carolina - Chapel Hill — Chapel Hill, NC
Ph.D. candidate in Computer Science — *Expected May 2028*

Georgia Institute of Technology — Atlanta, Georgia
Master of Science in Computer Science — *May 2021*
Specialization: Machine Learning
Cumulative GPA: 4.0

Wake Forest University — Winston-Salem, NC
Bachelor of Science in Finance, Finance GPA*: 3.8* — *May 2018*
Double Major, Computer Science, Computer Science GPA: 3.8
Cumulative GPA: 3.6

PUBLICATIONS

- **Merrill, S.**, & Srivastava, S. (2026). *Point of Order: Action-Aware LLM Persona Modeling for Realistic Civic Simulation*. Submitted to APR, Jan 2026.
- **Merrill, S.**, & McAvoy, A. (2026). *Population-based Learning in Simple Stochastic Games*. Submitted to AAMAS, Jan 2026.

PROFESSIONAL EXPERIENCE

University of North Carolina - Chapel Hill — Chapel Hill, NC
Graduate Researcher Assistant — *August 2023 - Present*

- I have had the pleasure of working with both Dr. Shashank Srivastava and Dr. Alex McAvoy.
- My research so far has focused on studying Multi-Agent Reinforcement Learning (MARL) through a game-theoretic lens.
- I am broadly interested in machine learning theory, particularly in building robust systems that generalize to out-of-distribution (OOD) data.
- I am fascinated by large language models (LLMs) and interested in improving their interpretability, analyzing hallucinations and biases, enhancing alignment, and developing LLM-powered agents.
- I am also interested in multi-modal learning, especially in integrating diverse modalities to create more intelligent and cohesive systems.
- I am excited about applying these ideas to real-world challenges in autonomous driving and embodied AI.

Graduate Lead Professor — *August 2024 - Present*

- Designed and delivered lectures, assignments, and exams for an 80+ student foundational data science course
- Taught core computational concepts including data structures and algorithms (DFS, BFS, insertion sort, quicksort)
- Introduced machine learning fundamentals, covering supervised and unsupervised learning methods
- Led course coordination and instructional planning to ensure consistency across sections

Wake Forest University — New York, NY
Graduate Researcher Assistant — *August 2022 - August 2023*

- Assisted Grey Ballard to research how to apply Newton's Method to Canonical Polyadic Decomposition's (CPD)
- Developed code in Matlab to perform rank 2 tensors decompositions and begun implementation for higher order tensors
- Studied how to use CPD to search for lower rank and hence faster matrix multiplication algorithms

Citigroup — New York, NY
Quantitative Researcher — *July 2021 - August 2023*

- Researched and developed machine learning based recommendation systems for loans to help identify clients most likely to purchase or sell an axe loan
- Worked with traders to add domain knowledge and improve the performance of collaborative and content based recommendation models
- Reduced errors and improve performance of existing ML models that predict the execution prices of loans
- Created a model to predict the confidence of the loan pricer helping to identify in advance predicted loan prices that may produce large errors
- Researched other probabilistic models more suited to perform loan pricing and confidence in an end-to-end manner (rather than having two separate models)
- Researched methods and models that take into account various risk factors such as current inventory and expected holding period to determine appropriate skew adjustments for loan quotes
- Supported current loan portfolio optimization code which produces swap trades as to maximize a CLO managers objective (WAS, WARF, etc.) subject to investment constraints
- Improved current optimization code to prioritize current axe loans helping the desk meet risk and holding objectives
- Built tools to identify the CLO managers most likely to engage in an optimization trade and moreover top candidates traders should solicit
- Created an INAV pricer for loan ETFs helping the desk to determine the profitability of creating or redeeming ETF units

Quantitative Analysis Summer Analyst — *July 2020 - August 2020*

- Explored models for forecasting interest rates and prepayments to value credit derivatives and mortgage backed securities
- Explored methods to model prepaymets and price mortgage backed securities

Weather Prophets — State College, PA
Quantitative Researcher — *August 2019 - December 2019*

- Utilized Bloomberg API to create monitors and screens that extend existing trading strategy and generated alpha signals in new markets
- Researched and backtested historical trading signals
- Combined weather models with technical factors to identify trading opportunities in energy and agricultural futures
- Developed Excel Macros to streamline the calculations of existing proprietary indexes and technical models

Société Générale — New York, NY
Analyst I — *July 2018 - August 2019*

- Wrote Python libraries to connect to various database API's to allow for easy extraction of data
- Developed Python classes to streamline complex problems
- Created scripts and dashboards to help monitor trading activities and ensure application stability
- Implemented software to detect and prevent traders from placing trades on markets for which they lacked proper licensing

Summer Analyst — *June 2017 – August 2017, June 2016 – August 2016*

- Improved order passing algorithm to include recent NASDAQ IPO's and newly listed ETF's enabling traders to engage in market making activity for these securities on the day of their listing
- Developed algorithms and wrote software to ensure compliance with trading requirements. Identified traders who were improperly using Societe Generale trading tools without appropriate exchanged-based licensing