

CONTACT INFORMATION

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EDUCATION

B.S., Statistics, North Carolina State University (NCSU)

Expected May 2026

Cumulative GPA: 3.92

Major GPA: 4.0

Planned Coursework (Spring 2026): Mathematical Analysis I, Applied Bayesian Analysis, Intermediate SAS Programming, Applied Differential Equations I

PROFESSIONAL EXPERIENCE

Emerson Math Tutoring, Raleigh, NC

October 2025 - Present

Owner

- Founded and scaled tutoring business serving K-12 and college students in mathematics and statistics, expanding from solo operation to a small team of tutors
- Developed full-stack web platform with Python/Flask backend and integrated APIs for scheduling (Google Calendar), payments (Stripe), and automated client communication (SendGrid)
- Create digital marketing content using Manim Python library for animated mathematical visualizations, building brand presence across social media platforms

Guardian Life, New York, NY

June 2025 - August 2025

Actuarial Analyst - Internship

- Analyzed large-scale claim data sets (10M+ records), using retrospective data to inform reserve factor calculation for pending, closed, and IBNR individual disability insurance claims in Excel, VBA, and SQL
- Developed an Excel-based forecasting model to project future expected transitioning claims, ensuring adequacy of reserves across a \$5.2B block
- Automated data validation and repetitive tasks with VBA, replaced legacy macros and reduced manual processing time by 90%

Emerson Rental Network, LLC, Charlotte, NC

August 2022 - Present

Owner

- Direct all financial operations for a portfolio of short and long-term rental properties, generating \$145,000+ annual revenue, maintaining strong profitability despite seasonal fluctuations
 - Built a rental property cash flow forecasting model (Excel) with KPI dashboard, sold commercially to real estate investors
 - Implemented automated dynamic pricing logic (AirDNA) informed by market-level occupancy data to optimize nightly rates
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ACADEMIC INVOLVEMENT

NCSU Department of Statistics

August 2025 - Present

Statistics Tutor

- Appointed tutor for the STAT Hub (Statistical Tutoring and Training Hub) by Dr. Emily Griffith & Dr. Logan Opperman
- Tutor undergraduate and graduate students from a variety of disciplines in statistics, probability, and programming (introductory through graduate-level courses)

Student Actuarial Organization, NCSU

President

May 2025 - Present

Vice President

December 2024 - May 2025

- Organize and lead monthly meetings for a student organization with 20+ active members
 - Coordinate guest speaker events with industry professionals
 - Facilitated a sponsorship with Coaching Actuaries to provide members with study material discounts and additional resources
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EXAMS AND CERTIFICATIONS

SOA Exam P

March 2025

Passed (Score: 10)

SOA Exam FM

October 2024

Passed (Score: 9)

PROJECTS

RepLeader Web Platform - In Progress

2025

- Designing a web platform for the purpose of estimating individual lifting performance percentiles using user-reported strength data and Bayesian hierarchical modeling
- Collaborating with Dr. Jeong Lee (NCSU Dept. of Wellness & Recreation) on a semester-long (spring 2026) pilot study with students enrolled in weightlifting courses to collect observational data and inform prior distributions
- Developing sampling methodology to mitigate response and nonresponse bias through tracking user inputs, experience levels, and paradata for weighting adjustments
- Building backend and user interface infrastructure for automated data collection, real-time feedback, and post-stratified population estimates

Trading Model

2025

- Designed a semi-automated Python program to test and execute a mean reversion trading strategy on the S&P 500 ETF using Polygon API for live data retrieval
- Conducted preliminary backtesting and parameter optimization (i.e., threshold for deviation, holding period for reversion target, lookback window length) using five years of historical data

Rental Property Cash Flow and Valuation Model

2022

- Designed a comprehensive Excel model to forecast rental property performance including NOI, cap rate, ROI, and 5-year pro forma projections
 - Distributed commercially to real estate investors
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TECHNICAL SKILLS

Skills: General Linear Models, Data Management, Full Stack Development (novice)

Software/Programming Languages: Python, R, SAS, LaTeX, SQL, Excel, VBA, HTML, CSS, Git

Python Packages: NumPy, Pandas, Matplotlib, SciPy, Polygon (client), yfinance, Flask

R Packages: tidyr, dplyr, ggplot2, purrr, Shiny