John P. Binek IV

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY, Scheller College of Business **Atlanta, GA**
Master of Science in Quantitative and Computational Finance *Summer, 2025*

- Key Coursework: Derivatives, Artificial Intelligence for Finance, Simulation, Regression Analysis, Computational Data Analysis, Data Mining & Statistical Learning

GEORGIA INSTITUTE OF TECHNOLOGY, H. Milton Stewart School of Industrial & Systems Engineering **Atlanta, GA**
Bachelor of Science in Industrial Engineering *December, 2023*
Concentrations: Analytics & Data Science, Financial & Economic Systems

- Key Coursework: Advanced Optimization, Advanced Stochastic Systems, Data Input/Manipulation, Machine Learning Probability with Applications, Basic Statistical Methods

WORK EXPERIENCE

UNITED STATES COAST GUARD
National Security Agency, Central Security Service (NSA/CSS) **San Antonio, TX**
Intelligence Specialist *December, 2016 – August, 2019*

- Deployed with USCG Cutters to support the Tactical and Operational commander on counter narcotics and National Security Intelligence using various computer programs and equipment.
- Assisted Customs and Border Patrol units in maintaining border security by surveying over 1000 miles of the United States-Mexico border and assessing / managing stressful and high-risk events instantaneously.

PROJECTS

QUANTITATIVE TRADING (PROJECT: PYTHON / R / AWS) *2021-Present*

- Analyze market maker positions across option chains to assess their hedging requirements and trading flows, according to Gamma, Vanna and Charm. Simulate scenarios to evaluate strike selection strategies that align with potential market movements, aiming to optimize upside in futures trading based on volatility and asset price dynamics.
- Automate the trading process via broker API and AWS servers, enabling continuous runtime and real-time portfolio surveillance across equity and option positions, with intraday data stored in a local database.
- Leverage natural language processing (NLP) to analyze earnings calls, company filings, and real-time news headlines, feeding these insights into a model that predicts future returns and how to initiate trades.

POKEMON TCG NEURAL-NETWORK (PROJECT: PYTHON) *Fall 2024-Present*

- Develop Pokemon Trading Card Game Simulator using Python and Tkinter, implementing Monte Carlo Tree Search (MCTS) to create an AI opponent capable of evaluating complex game states and planning multiple turns ahead.
- Enhanced the Simulator by integrating neural networks trained on competitive deck data to evaluate novel deck compositions, enabling automated testing against meta-dominant decks and providing statistical analysis of matchups.

NFL BIG DATA BOWL 2025 (PROJECT: R / PYTHON) *Fall 2024*

- Created team-specific formation embeddings from NFL tracking data, enabling similarity matching of pre-snap alignments across different weeks and opponents.
- Developed a hybrid approach combining LSTM, Transformers, and computer vision to enhance the prediction of player alignments and defensive strategies, providing actionable insights for coaches and performance teams.

SKILLS

Programming: Python, R, MATLAB, SQL, SAS, Excel, AWS, C++, Git
Certifications: Top Secret/SCI Clearance + Single Scope Background Investigation (SSBI) (Validated 2018)

AWARDS & ACTIVITIES

Awards: U.S. Coast Guard Letter of Commendation (2019/2016), U.S. Coast Guard Meritorious Team Commendation (2019)
Activities/Volunteer: Dedicated over 150 hours of community service in support of Hurricane Harvey and Hurricane Irma.