

GREGORY COLONESCU

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EDUCATION

Lehigh University M.S. in Financial Engineering GRE: 331	Aug 2023 – May 2025
• <i>Relevant Coursework:</i> Financial Stochastic Analysis, Stochastic Calculus, Financial Optimization, Optimization Models and Applications, Optimization Methods in Machine Learning, Random Processes	
• Industrial & Systems Engineering 2024 Financial Engineering Master's Student of the Year	
The University of Texas at Austin Mathematics, Finance with honors	Aug 2019 – May 2023
• Data Structures, Algorithms, Neural Networks, Predictive Analytics, Quant Investment Management, Differential Equations, Derivatives, Asset Pricing, Financial Volatility, International Macroeconomics	

EXPERIENCE

Edgewater Markets (FX Platform Provider) – Bethlehem, Pennsylvania	Dec 2024 – June 2025
<i>Proprietary Currency Trader</i>	
• Traded \$10-20 MM daily in spot FX markets, managing exposure across multiple currency pairs	
• Utilized a custom rules-based model to guide discretionary trades and optimize entry/exit points	
Hilltop Holdings (Institutional Mortgages) – Dallas, Texas	Jun 2022 – Aug 2022
<i>Quantitative Analytics Intern</i>	
• Conducted Peer Analysis and automated key steps, saving 25 hours per quarter	
• Calibrated mortgage volume/interest rate models in R Studio and VS Code, helping transition to ARMA	
ING Bank (Wholesale Banking) – Bucharest, Romania	Jun 2021 – Jul 2021
<i>IT/Software Intern</i>	
• Implemented BDD workflows with Cucumber, PlantUML, Git, and Docker to standardize testing	
• Designed and tested Python modules for high-throughput system processing 100K+ daily transactions	

CORPORATE SPONSORED QUANT PROJECTS

Projects: https://ggrrcc.github.io	
Machine Learning Interpretability Through Model Decomposition	Aug 2023 – Present
<i>Sponsor: Machine Learning book author and VP Quantitative Analytics, AI Quant at Barclays</i>	
• Spearheaded end-to-end modeling pipeline, overseeing each step and training project members	
• Trained random forest models based on quarterly accounting statements and daily prices	
• Quantified 2.2% alpha loss in global models, confirming alpha loss with greater interpretability	
Third Party Litigation Financing Contract Pricing	Aug 2024 – Present
<i>Sponsor: Attorney at McGuireWoods LLP</i>	
• Parsed thousands of webscraped lawsuits and court opinions using an LLM and factor engineering	
• Built mathematical models extending the Black-Scholes model and the Altman Z-Score frameworks	
• Calibrated deep learning models in tensorflow to price TPLF contracts with an average 70% correct prediction	
Blockchain Compliance	Jun 2024 – Jun 2025
<i>Sponsors: Inca Digital, DARPA, J.S. Held, and the Head of Quant Trading at Norrio Capital</i>	
• Detected market manipulation and bad actors through mathematical means and on-chain analysis	
• Constructed an algorithm detecting sanction evasion on USDT by Russian actors with 75% success	
Large Language Model Input Modification	Nov 2023 – Nov 2024
<i>Sponsor: Global Head of Financial Solutions at MathWorks</i>	
• Developed knowledge graph for the LLM, improving ability to determine relationships	
• Generated vectorization algorithm for detecting article matching percentages with user input questions	
• Performance tested use of AI agents to consolidate searching algorithm for recent LLM literature	

SKILLS

Technical Stack: Python, R, Git, LaTeX, SNP, Linux; Classroom proficiency: Java, MATLAB, SQL, AMPL

Languages: English (Native) | Romanian (Native) | Spanish (Basic)

Interests: Catan, Squash, Mentoring; LinkedIn: linkedin.com/in/Gregory-Colonescu/