GREGORY COLONESCU

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EDUCATION

Lehigh University | M.S. in Financial Engineering | GRE: 331 — Aug 2023 – May 2025

- *Relevant Coursework:* 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

Proprietary Currency Trader

- 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

Quantitative Analytics Intern

- 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

IT/Software Intern

- 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

Sponsor: Machine Learning book author and VP Quantitative Analytics, AI Quant at Barclays

- 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

Sponsor: Attorney at McGuireWoods LLP

- 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 to price TPLF contracts with an average **70% correct** prediction

Blockchain Compliance — Jun 2024 – Jun 2025

Sponsors: Inca Digital, DARPA, J.S. Held, and the Head of Quant Trading at Norrio Capital

- 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

Sponsor: Global Head of Financial Solutions at MathWorks

- 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/