

Barry Daemi

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Portfolio Website: <https://www.barry-daemi.com/>

EDUCATION

Southern Methodist University	Dallas, TX
<i>Dedman College of Humanities & Sciences</i>	Dec 2022
Master of Science in Computation and Applied Mathematics	
Bachelor of Science in Computation and Applied Mathematics	May 2020
with Departmental Distinction Honor	
Bachelor of Arts in Economics with a specialization in Econometrics	May 2020
with Departmental Distinction Honor	

SKILLS

Computer: Python, Rust, MATLAB, R, Microsoft Office, SAS, SQL (Structured Query Language)
Mathematics & Economics: Numerical Linear Algebra, Multivariate Stats, ODEs, PDEs, **Data Science**, General Linear Models, Neural Networks, **Machine learning**, Bayesian Inference, **Bayesian Optimization**, Mathematical and Statistical Algorithms, **Econometrics** and Numerical Analysis, and Iterative Methods.

EXPERIENCE

Collin College	Plano, TX
Temp-Full-Time Dual-Credit Professor of Mathematics	January 2024-May 2024
Adjunct Professor of Mathematics	August 2023-December 2023
<ul style="list-style-type: none">Teaching: MATH 1314: College Algebra, MATH 0405: Foundation Math; MATH 2412: Pre-Calculus; MATH 1342: Intro. to Statistics	
Ally Financial	Lewisville, TX
Data Science Intern	May 2022-August 2022
<ul style="list-style-type: none">Developed a machine learning model in Python that considered customer preference towards collection treatment.The new model reduced operational expenses by replacing 23,605 manual dialer calls made by debt collectors with Automated voice mail.Due to the models' performance, Ally Financial proceeded with acquisition of Dasceq Inc. supervised machine learning collection models.Created training, testing and validation datasets in SAS, cleaned and formatted datasets in Python.	
Skills: Python, SAS, Statsmodels, Pandas, Scikit-learn, Numpy, General Linear Models	
Southern Methodist University	Dallas, TX
Student-Worker: Math and Eco Tutor at The Altshuler-LEC	February 2020-May 2023
<ul style="list-style-type: none">Coordinated walk-in appointments for Mathematics and Economics, as well as programming assistance appointments in MATLAB and R, specifically for homework and project assignments.	

PUBLICATIONS AND PROJECTS

European Option Pricing Web Application	2024
<ul style="list-style-type: none">https://www.barry-daemi.com/Pricing_Option_App	
Explanation of Black-Scholes-Merton Model in Option Pricing	2024
<ul style="list-style-type: none">https://www.barry-daemi.com/Pricing_Option_App/BlackScholesModelExplained	
Statsmodel's OLS compared to Linear Least Squares via QR Decomposition	2023
<ul style="list-style-type: none">https://www.barry-daemi.com/statsmodels_ols_compared_to_least_squares_via_qr_decomposition	
Monte Carlo Methods to Simulate a Stock Portfolio	2023
<ul style="list-style-type: none">https://www.barry-daemi.com/monte_carlo_method_to_simulate_stock_portfolio	
Data Exploration of Simulated Data with Microsoft Excel	2023
<ul style="list-style-type: none">https://www.barry-daemi.com/Data_Exploration_of_simulated_Data_with_Microsoft_Excel2	
Neural Network Development with Micrograd Package	2023
<ul style="list-style-type: none">https://www.barry-daemi.com/neural%20network%20development%20with%20micrograd%20package	
Simulation Exercise – (Data Science) Job Demonstration	2022
<ul style="list-style-type: none">https://www.barry-daemi.com/simulation_exercise_job_demonstration	

ORGANIZATIONS & HONORS

Organizations: Alpha Chi Honor Society, Golden Key Inter. Honor Society, Phi Theta Kappa, The NSCS