

CHASE GILLIS

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EDUCATION

NEW YORK UNIVERSITY, *Courant Institute of Mathematical Sciences*

New York, NY | Madrid, Spain

Bachelor's in Computer Science, Minor in Data Science

Sep 2021 - May 2025

- **Awards:** Dean's List 4x, Student-Athlete Honor Roll, First-Generation Student, Sommer's & Florida Bright Futures Scholarships
- **Coursework:** Algorithms, Data Structures, Cryptography, Regression Models, Statistics, Linear Alg, Parallel Computing, Calc II
- **Organizations:** Zeta Psi (President), Tech@NYU (Project Lead), GDSC (Brand Lead), Quant Finance Society, Men's Wrestling

EXPERIENCE

U.S. CENTURY BANK, *Software & Data Engineer*

May 2024 - Present

- Developed a secure SSL WebSocket API in Python to retrieve customer data, replacing costly and unreliable C# legacy code
- Created a profitability model in SQL, Python, and Power BI to rank and explain account performance, boosting revenue by 10%
- Designed an archive system in Python, relocating 7+ year-old files, freeing multiple TBs of space, and improving efficiency 30%

JPMORGAN CHASE & CO. VIRTUAL PROGRAM, *Quantitative Researcher*

Jul 2024 - Aug 2024

- Crafted a natural gas price forecast model merging linear and sinusoidal regression, achieving a 90% price prediction success rate
- Priced a commodity storage contract by analyzing trading schedules, fees, and cash flow, increasing the value by 15%
- Estimated default probabilities and FICO score buckets with logistic regression and MSE, improving risk assessment by 10%

NYU 404 FITNESS, *Supervisor & Data Scientist*

Sep 2022 - Aug 2024

- Refined gym hours and staffing with Python and pandas, reducing staffing costs by nearly 25% to meet budget constraints
- Reduced theft by ~75% through a strategic campaign involving improved signage, rotation timing, and staff relocation
- Led a team of 50 attendants, managing hiring, training, scheduling, and enforcing policies as the youngest ever supervisor

SCALE AI, *AI Software Engineer Consultant*

Jan 2024 - Apr 2024

- Reviewed AI-generated code in C and other languages for compliance with company standards, ensuring quality responses
- Improved AI model performance by implementing efficient algorithms, raising content generation accuracy by ~12%

PROJECTS

ENCRYPTED MESSAGING CLIENT (GO), *Lead Developer & Engineer*

Oct 2024 - Nov 2024

- Restored a secure messaging client, based on Signal protocol with Elliptic Curve Diffie-Hellman, guaranteeing forward secrecy
- Secured messages with AES-GCM encryption, handled disordered/fraudulent messages, and provided deniable authentication

BITCOIN FORECAST LSTM MODEL (PYTHON), *Creator*

Jul 2024 - Aug 2024

- Engineered an LSTM model to predict Bitcoin prices with 85% accuracy, ranking in the top 25% of Trilemma Capital tournament
- Trained and optimized the model on historical closing prices using Adam optimizer and MSE loss function over 100 epochs

PAIRWISE TRADING ENGINE (JAVA/PYTHON), *Creator*

Jun 2024 - Jul 2024

- Built an algorithm using the Alpaca API, averaging a 1.48 Sharpe Ratio and 1.8% alpha on historical data through backtesting
- Presented visualizations for performance, price ratios, moving averages, and z-scores using Streamlit, highlighting market trends

ADDITIONAL INFORMATION

Programming Languages: Python, C/C++, Go, Java, Bash, x86 Assembly, SQL, JavaScript, HTML/CSS, GDScript

Tools & Frameworks: MongoDB, Godot Engine, Pandas, SciKit-learn, TensorFlow, Power BI, AWS, Excel, Git, Streamlit, Gradle

Certificates: Options 101 (Akuna Capital), Machine Learning on AWS, Bloomberg Market Concepts, Lyft SWE Forage, CPR, AED

Languages: English (Native), Spanish (Conversational)

Interests: Wrestling (3x State Champion, 5x All-American), Auto-Mechanics, Chess, Poker, Fishing, Spikeball, Motocross