

# CHASE GILLIS

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## EDUCATION

**NEW YORK UNIVERSITY**, *Courant Institute of Mathematical Sciences*

New York, NY | Madrid, Spain

**Bachelor of Arts 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
- **Roles:** Zeta Psi (President), Tech@NYU (Project Lead), Google Developer Group (Marketing), Quant Finance Society, Wrestling

## EXPERIENCE

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

May 2024 - Present

- Developed a secure SSL WebSocket API in Python to retrieve customer data and replace costly and unreliable C# legacy code
- Created a profitability model in SQL, Python, and Power BI to categorize account performance, which boosted revenue by 10%
- Designed a Python archive system that relocated 7+ year-old files, freed multiple TBs of space, and improved efficiency by 30%

**NYU 404 FITNESS**, *Supervisor & Data Scientist*

Sep 2022 - Aug 2024

- Refined gym hours and staffing using Python and Pandas to reduce staffing costs by ~25% and meet budget constraints
- Reduced theft by ~75% through a strategic campaign that involved improved signage, rotation timing, and staff relocation
- Led a team of 50 attendants, managed hiring, training, scheduling, and enforced 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 to ensure high-quality responses
- Improved AI model performance by implementing efficient algorithms to increase content generation accuracy by ~12%

## PROJECTS

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

Oct 2024 - Nov 2024

- Restored a secure messaging client based on the Signal protocol with Elliptic Curve Diffie-Hellman to guarantee forward secrecy
- Secured messages using AES-GCM encryption to handle disordered and altered messages, and provide deniable authentication

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

Jul 2024 - Aug 2024

- Crafted a natural gas price forecast model by merging linear and sinusoidal regression to achieve a 90% prediction success rate
- Priced a commodity storage contract by analyzing trading schedules, fees, and cash flow which increased its value by 15%
- Estimated default probabilities and FICO score buckets using logistic regression and MSE to improve risk assessment by 10%

**BITCOIN FORECAST LSTM MODEL (PYTHON)**, *Creator*

Jul 2024 - Aug 2024

- Engineered a LSTM model to predict Bitcoin prices with 85% accuracy to place in the top 25% of the Trilemma Capital Contest
- Trained and optimized the model on historical closing prices using the 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 that achieved a 1.48 Sharpe Ratio and 1.1% alpha on historical data through backtesting
- Presented visualizations for performance, price ratios, moving averages, and z-scores using Streamlit to highlight 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:** Akuna Capital Options 101, 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