Dominic Magats

📞 +1 (650) 709-4213   ✉ dmagats@stevens.edu   🔗 linkedin.com/in/dominic-magats-6bb914230   ⊙
github.com/reb0und

Education

Stevens Institute of Technology   Expected May 2028
Bachelor of Science in Computer Science, Mathematics   *Hoboken, New Jersey*
- **Relevant Coursework:** Calculus, Multivariable Calculus, Linear Algebra, Discrete Structures

Experience

Verge   Jun 2023 – Aug 2024
Founder   *Remote*
- Architected and led the development of a financial data aggregation platform that enables users to manage personal and family finances in a single dashboard.
- Engineered APIs in Go and GraphQL to enable real-time data aggregation and synchronization across user accounts.
- Implemented Stripe and Plaid APIs, allowing users to securely purchase subscriptions and link their financial accounts to the Verge platform.
- Integrated Alpaca's trading API to enable seamless stock trading functionality within the Verge platform, allowing users to manage portfolios directly from their accounts.

Breeze   April 2022 – October 2022
Software Engineer   *Remote*
- Developed and maintained core Solana blockchain modules in Go, including rewrites of Metaplex's Candy Machine program and Magic Eden's Launchpad, enabling users to efficiently manage and acquire decentralized assets such as NFTs.
- Engineered a private RPC node on Solana's network, significantly reducing transaction times and boosting performance by significantly minimizing latency during blockchain interactions.
- Analyzed Solana's TPU (Transaction Processing Unit) to optimize transaction speeds, reducing the time transactions spent on a block, thereby improving throughput.
- Created CI/CD pipelines to streamline deployment processes, ensuring rapid and reliable updates and releases.

Projects

Random Forest Classifier Algorithmic Trading Strategy | *Python, Yahoo Finance, Pandas, NumPy, scikit-learn*
- Implemented a Random Forest Classification model to predict stock price directions through features such as RSI, MACD, and other technical indicators, achieving 92% prediction accuracy over a 90 day time period, trained on 1 year of historical data.
- Developed a trading algorithm using signals from the model's predictions.
- Integrated a backtesting framework to validate the strategy, achieving cumulative returns of 13%.

RSI-Based Algorithmic Trading Strategy | *Python, TensorFlow, Yahoo Finance, Pandas, NumPy, scikit-learn*
- Developed a trading algorithm leveraging LSTM neural networks to predict RSI values and generate buy/sell signals based on predicted market conditions.
- Implemented a backtesting framework to evaluate the strategy's performance, optimizing model parameters to achieve a MSE of 0.025% and robust trading results.
- Conducted backtesting to validate model performance, achieving 18% cumulative returns with strategy.

Binomial Option Pricing Model | *Python, NumPy, Pandas, Streamlit*
- Developed a Binomial Option Pricing Model to calculate the theoretical price of American options.
- Implemented a dynamic stock price tree generation and option valuation algorithm, optimizing the model for different market conditions.
- Integrated a Streamlit GUI, allowing users to input parameters and visualize the pricing model.

Technical Skills

Languages: Java, Python, C++, JavaScript, TypeScript, Go, SQL
Technologies: Docker, Flask, Spring Boot, Express.js, TensorFlow, scikit-learn, Flask, Node.js, Electron, Gradle, gRPC, Maven, Git, AWS, GCP, PostgreSQL, MySQL, MongoDB, Redis, Github Actions, CircleCI, Terraform, Postman, LLDB, Shell
Concepts: Machine Learning, Neural Networks, Artificial Intelligence, Quantitative Finance, Compilers, Operating Systems, Memory Management, Encryption, APIs, Cloud Computing