Nicholas Ribeiro

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EDUCATION

Yale University, New Haven, CT   Expected Graduation May 2026
Bachelor of Science, Computer Science and Statistics & Data Science | GPA: 3.78
Relevant Coursework: Behavioral Finance, Systems Programming & Computer Architecture, Algorithms, Game Theory, Probability Theory, Data Structures, Data Analysis, Financial Analyst Training Program, Akuna Capital Options 101
Activities: Yale Poker Club President, Yale Computer Society Project Lead, Yale Student Technology Collaborative

WORK EXPERIENCE

Efficient Computing Lab, *AI Research Assistant*, New Haven, CT   June 2024 – August 2024

Yale Student Investment Group, *Equity Analyst*, New Haven, CT   September 2022 – Present
- Actively manage a ~$500,000 portfolio in public equities, specializing in Small Cap and Industrials sectors
- Conduct market research and fundamental analysis using DCFs, Fama-French models, and other valuation methods
- Present weekly stock pitches, give technical presentations to 40+ analysts, investment managers, and executive board

Elevance Health, *Data Analytics Intern*, Indianapolis, IN (Remote)   June 2023 – August 2023
- Developed Snowflake analytical tools using Python and SQL for 14+ million Medicaid beneficiaries nationwide
- Wrote Python scripts to automate statistical identification of key metrics of improvement, streamlining operations
- Implemented machine learning and regression models resulting in 5% optimization of early-stage cancer detection tool

YMeets, *Software Development Team Lead*, New Haven, CT   September 2022 – Present
- Directing 12+ developer team in creation of an application to determine optimal group availability for meetings
- Implemented Firebase Authentication functionality, Google Calendar API integration, and mobile compatibility
- Spearheaded integration effort, merging React.js components with backend features to deploy a functional product

Milestone C, *Software Development Intern*, Shelton, CT   June 2022 – August 2022
- Streamlined internal processes through creation of a relational cloud database, enabling automatic purchase orders
- Developed novel Cybersecurity & Cryptography curriculum for implementation in 14 states, designed Python coding projects encompassing ciphers, RSA and AES encryption, and password security
- Consultant for IoT curricula encompassing web development, NoSQL databases, and Python for Raspberry Pis

RESEARCH

Query-focused and Trustworthy Document Analysis Generation over Long Multimodal Document   August 2023
- Utilized iterative prompting and multi-agent collaboration methods to develop few-shot learning models for LLM financial data analysis, leveraging GPT-4 through OpenAI's API as well as Meta AI's LLaMA model
- Developed a reliable automated LLM evaluation pipeline for SEC Filing (10-K) analysis generation and refinement

Investigation of Figurate Numbers and Their Extension in Euclidean Space   December 2021
- Derived formulas for the extension of figurate numbers to Euclidean n-space, revealing geometric symmetries

PROJECTS

Benford's Law Stock Pricing: Real-time statistical identifier of anomalous stock pricing activity and volatility in Python
Flappy Bird AI: Artificial neural network using NEAT evolutionary algorithm to play Flappy Bird-like game perfectly
Amabam: AI-powered website providing personalized way to learn new skills, uses CNNs and CV for tailored feedback
TeX-like Macro Processor: Macro expansion program in C enabling user-defined macros and large document parsing

SKILLS

- *Computer Languages:* Python, C, Java, R, Assembly, Rust, C++, SQL, HTML, CSS, JavaScript, Racket, TypeScript
- *Tools and Libraries:* Pandas, NumPy, REST APIs, Git, Unix, Firebase, Snowflake, Excel, LaTeX, React.js
- *Interests:* Poker, running, traveling, photography, learning languages, origami, chess, golfing, table tennis, Spikeball