PATRICK PYNADATH

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EDUCATION

Northwestern University **Evanston, Illinois**
Bachelor of Arts in Math and Computer Science, Minor in Economics *Expected June 2022*

- **Cumulative GPA: 3.76/4.00;** Dean's List Scholar; SAT Score: 1530/1600
- Relevant Coursework: Data Structures & Algorithms, Econometrics, Graph Theory, Intermediate Microeconomics, Linear Algebra, Multivariable Calculus, Money & Banking, Statistics, Stochastic Processes

EXPERIENCES

Magnetar Capital **Evanston, Illinois**
Alternative Credit & Fixed Income Intern *April 2020 — Present*

- Re-engineered Python project for loading data from validated excel models to SQL database
  - Created functions for handling various errors by creating text document in file location and sending error email
  - Reordered processes within code to create distinct extraction, transformation, and loading processes
  - Developed testing framework from scratch to ensure validity of process for all types of inputs
  - Created staging tables for data updates, avoiding usage of temporary memory within database
  - Implemented centralized loading process to cut down run time from ~60 seconds to ~5 seconds per company
- Provided support with several back-office tasks through role on Part Time Analytics team
  - Responsible for running daily PnL reports for ACFI and Firm funds, assisting with firm-wide reports
  - Entered bond data in offering list manager, a data management tool for tracking deals on bonds

Investment Management Group **Evanston, Illinois**
Vice President, Portfolio Manager *November 2019 — Present*

- Worked together with team to create stock pitch on SaaS company Autodesk
  - Delegated responsibilities to group members to efficiently research SaaS industry and history of company
  - Integrated assumptions of company growth based on earnings calls into DCF model
  - Directed team in creating presentation including product overview, industry & competitor analysis
- Led portfolio management committee to create first quarterly portfolio update memo
  - Assigned responsibility to evaluate positions to team members based on prior exposure to industries
  - Reviewed all member's contributions to memo for accuracy, clarity, and consistency
  - Wrote mission statement outlining changes to portfolio management process and future portfolio strategy

PROJECTS

Trend Reversal Classifier

- Created a database stored on AWS of S&P 1500 stock data with automatic updating capabilities
- Implemented technical indicators such as RSI, MACD, Klinger Oscillator, and Stochastic Oscillator
- Developed script to identify closing price trend reversals using 5 day and 30 day exponential moving average
- Built pipeline to construct features and label reversals as "true positive" if duration is longer than 2 weeks
- Designed neural network classification model to distinguish true positives from false positives
- Crafted trading algorithm based on trend identification to evaluate performance of machine learning model

Custom Python GDB Commands

- Utilized Python interpreter and GDB package to automate process of debugging on Linux server
- Parsed assembly code generated from executable object to identify specific commands that halt debugging
- Implemented custom GDB commands on bomblab assignment for Systems class, effectively circumventing safeguards against brute-forcing passwords without alerting the class server

SKILLS & INTERESTS

Organizations: Phi Delta Theta, Northwestern Investment Management Group
Skills: C, C#, C++, GDB, Java, Python (BeautifulSoup, Keras, Numpy, Pandas), Racket, SQL
Interests: Classical Piano, Running, Mario Kart Data Analysis, Creative Writing