Aryan Padmanabhan

6933 Edington Cir Shakopee MN 55379 | +1 (612) 245 1180 | aryanpaddy007@gmail.com | LinkedIn | GitHub

EDUCATION & CERTIFICATIONS

University of Minnesota, Twin Cities – College of Science and Engineering *Expected May 2026*
Bachelor's of Science: Computer Science | Dean's List | Iron Range Scholarship
Relevant Courses: Data Structures & Algorithms; Discrete Structures; Intro to Probability and Stats; Intro to Programming

Stanford Machine Learning *Issued 04/2022*

SKILLS & TECHNOLOGIES

Python; Java; Minilang, Cloud Computing (Heroku); Git; Visual Studio Code; IntelliJ; Google Colab; Google App Scrips

PROFESSIONAL EXPERIENCE

United Health Group | *Software Engineer Intern* **Mpls, MN** | *06/2023 - Present*
- AI/ML development with RapidAI team
- Use internal tools and languages for image processing platform, pill validation utilizing AI, and behavior oriented fraud detection

MN Quants | *Quantitative Developer* **Mpls, MN** | *10/2022 - Present*
- Write and optimize code for numerical and statistical analysis, including data cleaning, model calibration, and backtesting
- Develop software to support quantitative research, trading, and risk management activities
- Build backtesting platforms that allow traders and researchers to test the performance of quantitative models using historical data
- Implement execution algorithms for algorithmic trading strategies and develop tools for portfolio rebalancing and optimization

FuzeMee | *FrontEnd UI/UX Data Analyst Intern* **Remote** | *09/2022 - 01/2023*
- Providing insights into the front-end user experience via mobile application data analysis
- Tracking trends in consumer behavior to locate potential opportunities and address root issues
- Collaborating with the development team to improve app features and mitigate technical risks

PROJECTS

Project Signol – *JavaScript*, *Python* ***06/2021 – Present***
- Built a breakout/momentum alerting system in order to locate the prime opportunities in the market and utilized time triggers in Google App Scripts for live market utilization.
- Developed a backtesting environment for historical testing and designed an algorithm to be 82% accurate on over 120 live trades on sector ETFs
- Streamlined the algorithm for retail use by over 1200 people where it has assisted in making $3.7M in member profits
- Created 6 custom commands for trading in the stock market: liquidity tracker, relative volume, short float. Utilized selenium to load data from websites to the script in real-time and launched the program to the cloud using Salesforce's Heroku to be used by over 1,200 traders globally

Portfolio Optimization - *Python* ***02/2023 - 05/2023***
- Led the development of a Python-based software tool leveraging advanced mathematical techniques such as Modern Portfolio Theory and the Efficient Frontier model
- Created and optimized algorithms for statistical techniques such as covariance matrix estimation and risk-return analysis
- Achieved significant improvements in portfolio performance metrics and delivered a solution to enable data-driven investment decisions

® Best Buy Curbside Pickup App Integration - *HTML, CSS, SQL* ***08/2020 —1/2021***
- Designed and implemented the user interface of the curbside pickup web application using HTML and CSS
- Integrated the web application with backend systems using SQL to ensure seamless data flow between the app and the database