Meghana Paruchuri

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https://github.com/meghpar | U.S. Citizen | Willing to Relocate

Education

University of Michigan – Ann Arbor Ann Arbor, MI
Bachelors of Science in Computer Science, Minors in Math and Business (GPA: 3.66/4.0) *Expected May 2026*
Relevant Courses: Operating Systems, Machine Learning, Web Systems, Data Structures and Algorithms, Computer Architecture, Computer Theory, Discrete Mathematics, Stats and Data Analysis, Linear Algebra
School Clubs: APEX Consulting (Project Manager and Tech Lead), Indian American Student Association

Skills

Languages: C++, Java, Python, JavaScript/JQuery, C, HTML, CSS, SQL, Assembly, RStudio
Frameworks: Spring/Spring Boot, Node.js, Flask, React, REST API, PowerMock, JUnit, Log4j
Developer Tools: Git, AWS, Maven, Gradle, Jira, Kanban, Redis, VSCode, XCode, IntelliJ IDEA, Tableau
Additional: English, Telugu, Spanish, Agile Methodologies, Tutoring, Poker and Ping Pong Enthusiast

Experience

Software Engineer Intern May 2024 – Aug 2024
Charles Schwab *Ann Arbor, MI*
- Engineered a **Java** tool for an award-winning trading platform that allows users to save and quickly apply their preferred time aggregation settings to candlestick charts, enhancing UX by **eliminating over 10 clicks per user**
- Revamped the logging process in **Log4j2** by segregating various statuses (e.g., startup, build, execution) into different files, **improving log file simplicity by 20%** and easing the process of debugging and testing

Quantitative Developer Sep 2023 – Present
Michigan Investment Group *Ann Arbor, MI*
- Architected a quantitative algorithm that used **Numpy, TA-Lib, and Pandas** to simulate MACD and Relative Strength Index indicators to guide trades, resulting in a **profit of 11%** when run on real-time stock data
- Led 6 quantitative developers to conduct data analysis on historical stock market data, assessing which financial trends were relevant to keep track of when designing the algorithm to manage portfolio risk

Software Developer Intern May 2023 – Aug 2023
Voya Financial *Windsor, CT*
- Accelerated return speeds of personalized ROI data on Voya app/website by **12%** by implementing Redis Caching in tandem with API calls to an Oracle database, asynchronously updating data as necessary
- Designed comprehensive disaster recovery plans to allow for seamless **migration of 20 Java PCF applications to OpenShift** by establishing backup and restore procedures and failover strategies for critical components

Projects

Landmark Image Classification | *Python, CNNs, PyTorch, Machine Learning* Feb 2024 – Mar 2024
- Executed deep learning techniques for image classification, training a convolutional neural network to process images and label European buildings at 90% accuracy
- Enhanced accuracy by applying transfer learning, utilizing a source model trained on non-European landmarks to effectively initialize and fine-tune the network for the target classification task
- Improved model robustness against overfitting through data augmentation techniques, including rotation and grayscale transformations of training images, leading to 14% improvements in test performance

AItinerary | *Python, JavaScript, Node.js, Google Firebase, OpenAI API* May 2023 – Aug 2023
- Built an AI travel planner that leverages GPT-3.5 and Weather APIs to deliver personalized vacation itineraries based on user input and preferences, built around a real-time weather forecast
- Incorporated Google Firebase for user authentication and data storage, enhancing the web application with secure sign-in and efficient handling of previous itineraries to reduce per-use user clicks by over 20

Stock Market Simulator | *C++* Dec 2022 – Jan 2023
- Developed a market order matching system that facilitates efficient buy and sell transactions for stocks using priority queues, hash tables, and binary search trees
- Implemented a "time travel" feature, allowing users to analyze historical data to identify the time they could have made maximal profit to guide future trading decisions