Rohan Erasala

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EDUCATION

Johns Hopkins University **Sep 2023 - Present**
M.S Artificial Intelligence *Baltimore, MD*

University of Michigan **Sep 2019 - May 2023**
B.S.E Computer Science, Magna Cumme Laude *Ann Arbor, MI*

- **Coursework:** Software Engineering, Artificial Intelligence, Computer Security, Info Retrieval + Web Search

WORK EXPERIENCE

Amazon **May 2022 - Aug 2022**
Software Development Engineering Intern *Seattle, WA*

- Created a serverless web application to track employee schedules using the AWS Cloud Development Kit
- Designed a NoSQL database with DynamoDB capable of efficiently scaling up to 90,000 users across 22 availability zones, and performed CRUD operations with 4 custom GraphQL resolvers and AWS Lambdas
- Secured all endpoints with AWS Identity Access Management and Midway to maintain internal usage
- Built frontend using Typescript + React.js and conducted user research to verify customer usability

Ford Motor Company **May 2021 - Jul 2021**
Software Engineering Intern *Dearborn, MI*

- Designed and developed a full stack web application to monitor the health of 25 servers on Ford GSPAS Database with 3 other developers using HTML5, CSS3, Javascript for frontend, and Perl for backend calls
- Automated 4 stability testing processes using Java + Selenium, reducing necessary testing time by 24%
- Implemented 2 REST APIs and created exception handling protocol for internal Spring Boot application
- Won “Most Creative Pitch” award at IT Innovation challenge for mockups of an EV zipcar-style service

PROJECTS

Video Game Recommendation System: Collaborated with a 5-member team to develop a content filtering recommender system for video games. Calculated cosine similarity between textual descriptions, integrated numeric factors into a recommendation algorithm, and achieved higher accuracy than BERT recommendations.

Cloud Video Platform: Developed a scalable web platform for hosting videos using Google Cloud services. Created a containerized video processing service in Cloud Run using ffmpeg and Express.js, and stored videos in Cloud Storage. Used Firestore to store video metadata, and Firebase API to fetch videos for Next.js application.

Deep Neural Network for Chess: Built and trained a Deep Neural Network (DNN) model for a chess AI, utilizing TensorFlow. Generated 500 random chess boards for training, tuned hyperparameters with grid search and SGD optimizer. Outperformed minimax algorithm with alpha-beta pruning in testing.

Stock Index Value Predictor: Scraped 100 stock tickers with BeautifulSoup and passed into trading API to get historical pricing data. Stored data in SQLite databases and ran regression analysis of stock prices against indicators including unemployment rates and gas prices. Displayed findings in graphs with Matplotlib.

SKILLS

- **Programming:** Python**,** C++, Java, Javascript
- **Frameworks:** NumPy, Pandas, TensorFlow, Keras, scikit-learn
- **Cloud:** AWS (DynamoDB, Lambda, IAM), Google Cloud (Storage, Run, Pub/Sub, Firestore, Firebase)