

Arriyan Raza

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EDUCATION

University of Michigan

Bachelor of Science in Computer Science, Minors in Math & UX Design, ELP Fellow

Ann Arbor, MI

December 2024

EXPERIENCE

Software Engineer Intern

June 2024 – August 2024

American Airlines

Fort Worth, TX

- Implemented a genetic algorithm designed by PHD ML researchers using Java libraries Express and Groovy to improve a solver for optimal baggage paths in airport systems, significantly enhancing transfer times
- Rewrote an existing solver from R to Java, leveraging Java's robust performance and scalability to enhance the efficiency and reliability of crew placement during irregular flight operations
- Performed data extraction using Python scripts with Pandas, Openpyxl, and advanced SQL techniques, automating weekly reports for 2,000 erroneous flight numbers to codeshare partners and identifying \$27 million in revenue opportunities through complex data analysis
- Developed and debugged Compact Application Solution Language (CASL) scripts for Passenger Name Record (PNR) automation in SABRE GDS, automating 97% of PNR metal swaps

Software Engineer Intern

June 2023 – August 2023

Gentex

Grand Rapids, MI

- Implemented cursor pagination functionality for retrieving notifications in cloud infrastructure software system using Node.js, Express, and updating DynamoDB GSIs resulting in improved scalability from offset-limit pagination
- Collaborated to design query logic into the existing REST API endpoints, ensuring seamless integration with the application's AWS cloud infrastructure. Testing requests with Postman+Nodemon, building tests with uvu, and documenting with Stoplight
- Designed AWS CDK stacks using TypeScript to define infrastructure components such as Amazon S3 buckets and AWS Lambda functions, enabling efficient and scalable cloud infrastructure
- Shipped code into production for Smart Home IoT product leveraging Docker for CI/CD deployment pipelines

Product Management Intern

June 2022 – August 2022

Numerator

Chicago, IL

- Launched specialized chart export feature through analyzing user analytics in LogRocket, prototyping in Figma, and collaborating with software engineers, resulting in 8% increase in exports
- Revamped product feedback loop by utilizing the 'double diamond' approach, conducting internal research, and developing Slack Workflow, resulting in clearer feedback themes, and improving Agile project management

Chief Technology Officer

January 2022 – Present

Blueprints for Pangaea 501(c)(3)

Ann Arbor, MI

- Lead technology initiative of organization dedicated to repurposing excess medical supplies and redistributing them to underserved communities globally, aiming to reduce waste and improve access to essential medical resources
- Integrated machine learning model using OpenAI Vision API and evaluated various OCR APIs to enhance the inventory management process, achieving high accuracy in text recognition and data extraction for efficient inventory tracking. Reducing inventorying time by 200%
- Developed simple mobile app using React Native, incorporating offline-first capabilities to work around poor network conditions in the warehouse. Ensured reliable and seamless inventory management, significantly improving operational efficiency

TECHNICAL SKILLS

Languages: Java, Python, C/C++, TypeScript, SQL, JavaScript, HTML/CSS, R, CASL

Frameworks: React, Node.js, Flask, Express.js, JUnit, WordPress, Material-UI, FastAPI, SvelteKit, Groovy

Developer Tools: Git, Docker, TravisCI, Google Cloud Platform, AWS CDK, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, Jupyter Notebooks, Automate Anywhere

Libraries: pandas, NumPy, Matplotlib, PyTorch, TensorFlow, Openpyxl

Other: Tour Guide at UofM, Selected as UofM Entrepreneurship Fellow, IM Soccer Referee, Founded Volleyball League