Immanuel Monroe

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Experience

Software Engineer, Resilient Coders. – Philadelphia, PA Jan 2025 – Present

- Improved text processing reliability by developing Python functions with unit tests to handle varied input formats, reducing errors/edge case failures in content rendering, ensuring easier integration into larger data workflows.
- Built and deployed an image classification model using PyTorch and fast.ai on custom datasets, integrating with a web interface via Gradio, improving accessibility of model predictions.
- Collaborated with team members to implement a Python-based CLI program to automate text analysis, generating reports on word counts, frequency distributions, and punctuation usage from large documents.
- Refactored entity management into reusable Python modules, decreasing integration errors during feature additions and accelerating new feature deployment by 30%.

Software Engineer, Manna Inc. – Philadelphia, PA Jan 2023 – Jan 2025

- Automated e-commerce and banking data aggregation by engineering backend services with Node.js/Express, PostgreSQL, and Google Cloud Functions, integrating Shopify APIs and secure secrets to boost workflow efficiency and data reliability.
- Resolved a nil pointer dereference in a GraphQL resolver by adding session null checks, preventing crashes for unauthenticated requests and improving API reliability.
- Improved app performance and state management by building a custom React hook for API fetching and error handling, and adding a data filter to remove duplicate responses, cutting load times from 5s to 2s and boosting data integrity.
- Enhanced development efficiency and data reliability by building full CRUD operations with a Spring Boot REST API and PostgreSQL, connected to a Next.js frontend and containerized with Docker for consistent local environments.

Software Support Engineer, InformData – Remote Feb 2024 – July 2024

- Reduced team ticket closeout time by troubleshooting an error in the system that impacted daily error queue report delivery, leveraging DataDog and AWS (S3) for log analysis and client API payload verification.
- Resolved a ticket credit allocation error by optimizing complex SQL queries and implementing data integrity checks, restoring accurate vendor metrics crucial for fair performance reviews and preserving strong vendor relations.
- Increased system uptime by resolving recurring page crashes with data validation scripts to address relational database null values on user records reported by external vendors.

Skills

Language: HTML, CSS, JavaScript, Python, SQL, Java

Database: Microsoft SQL Server, Firebase, SQLite, PostgreSQL, MongoDB

Frameworks/Libraries: React, Next.js**,** TypeScript, Node.js, Express.js, EJS, Spring Boot, Tailwind, Bootstrap, PyTorch, fast.ai

Tools/Platforms: Git, Docker, GCP, AWS, Linux, CI/CD, Jira, Postman, DataDog, Jest, Playwright, unittest

Projects

Eremos – AI-Powered Mental Health Journal github.com/immonroe/eremos

- Integrated Gemini AI API to generate personalized mental health reflections from user entries
- Developed a responsive analytics dashboard using Chart.js for data visualization, transforming raw journaling data into visual streaks, trends, and usage patterns, increasing user engagement and retention.
- Streamlined MongoDB queries and partial components to reduce memory use and speed up page loads.

SafeRoute – Community Safety Map safe-route-6iqv.onrender.com

- Engineered a full-stack interactive map with Leaflet.js, Node.js/Express.js, and MongoDB, enabling real-time reporting
- Implemented secure user authentication and session management using Passport.js/bcrypt, ensuring safe, reliable access.
- Integrated Node-Geocoder, Cloudinary, and Multer for geocoding, secure image uploads, and accurate map plotting.
- Designed and implemented auxiliary Mongoose schemas to structure backend data, improving maintainability and supporting scalable application features.

Education

University of Valley Forge – BS in Social Work Apr 2018