TAHA AZIZ

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EXPERIENCE

Sentia   Richmond Hill, ON
Software Engineer   Jul. 2024 – Dec. 2024
- Developed Sentia data storage platform mainly with Azure and Node.js for 50+ global enterprise clients
- Switched backup uploads from full-file to chunk-based deduplication using SHA-256 block hashing before writing to Azure Blob Storage, lowering storage volume by 23% and saving ~$75k/year in cloud costs
- Built REST API endpoints using Express.js and TypeScript to write metadata and file hashes from server to Postgres with SQL queries
- Standardized code reviews with SOLID principles, reducing tech debt and onboarding time for new hires

Software Engineer Co-op   Jan. 2023 – Aug. 2023
- Diagnosed API latency and replaced JSON stringify with streams, cutting response time from 480 to 210ms
- Wrote Jest tests for API endpoints, improving coverage and reducing regressions
- Integrated OpenTelemetry tracing and metrics, reducing engineering time spent diagnosing crashes

Sheertex   Montreal, QC
Software Developer Co-op   May 2022 – Jul. 2022
- Developed a production monitoring dashboard using Python, Flask, AWS S3, and React
- Engineered a QA pipeline with machine vision using Python and PyTorch, enabling automated defect detection at 96.7% accuracy for manufactured goods to reduce QA time by 75%

St. Joseph's Healthcare   Hamilton, ON
Full Stack Developer Co-op   Jan. 2021 – Apr. 2021
- Implemented SQL stored procedures to feed Power BI dashboards for patient data monitoring
- Engineered an ETL pipeline using Python and pandas to sanitize and process large-scale healthcare datasets
- Built a staging environment for the dashboard using GitLab CI/CD, preventing production errors

PROJECTS

Vis-jit NPM Package | JavaScript
- Authored npm module "vis-jit" with JavaScript, for tracing and visualizing Node.js JIT optimizations, such as type inference and inline caching, currently serving 400+ weekly active downloads
- Implemented client-server model for serving log data from Express.js to the frontend visualizer

User Auth Service | TypeScript, SQL, Rust
- Architected an authentication microservice using React, Node.js, Postgres and Docker, with Rust-based parallel Argon2 password hashing integrated via Node.js N-API for <10ms runtime

Waterloo Rocketry: Rocket Tracking Software | C++
- Developed embedded C++ software for GPS radio telemetry of the team's rocket, with checksum validation of incoming bytes for fault tolerance, allowing operation with up to 50% malformed byte frames

SKILLS

Languages: JavaScript (ES6+), TypeScript, Python, SQL, Rust, C++14,
Technologies: Jest, Node.js, React, PyTorch, pandas, Flask, Redis, Postgres, Docker, Azure, AWS, Git, CI/CD

EDUCATION

University of Waterloo   Waterloo, ON
Bachelor of Applied Science in Mechatronics Engineering and Computing   Jun. 2024
- Coursework: Operating Systems, Algorithms, GPU Programming, User Interfaces, Intro to AI