Miguel Quebrado

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Summary

Software Engineer with a Master's in Computer Science and 9+ years of experience designing scalable web applications, data platforms, and business intelligence workflows. Skilled in frontend development (React, Next.js, ExtJS), backend API development (Node.js, Express), and BI tooling (Tableau, Snowflake). Proven ability to deliver maintainable, high-performance systems in production using Docker, GCP, and relational databases like PostgreSQL and MySQL. Passionate about building clean UI, writing efficient ETL pipelines, and turning complex data into actionable insights.

Education

M.S. COMPUTER SCIENCE BOISE STATE UNIVERSITY   FALL 2021 GPA 3.57
B.S. ELECTRICAL ENGINEERING BOISE STATE UNIVERSITY   MAY 2015GPA 3.36

LANGUAGES

·   JavaScript(ES6+), Java, Python, C, C#, ExtJS, SQL
FrontEnd
·   React.js, Next.js, Tailwind CSS, ExtJS, Bootstrap, JSX, Playwright
BackEnd
·   Node.js, Express.js, REST APIs, JWT Authentication, PostgreSQL, Docker, Docker Compose, pgAdmin
DevOps & Deployment
-   **Containerization & Orchestration:** Docker, Docker Compose - **Deployment Platforms:** Render (production hosting), GCP
-   **Version Control:** Git (GitHub, GitLab, Bitbucket) -   **API Testing & Debugging:** Postman, Chrome DevTools, browser Network/Headers
Databases
·   PostgreSQL, MySQL, Snowflake, SAP HANA
Data Engineering & BI
Tableau (Desktop & Server), ETL Pipelines, Data Modeling

Full-Stack Authentication & User Management App: <u>Frontend Repo</u> | <u>Backend Repo</u>

- Developed full-stack app with React, Node.js, and PostgreSQL for secure JWT-based user login/authentication.
- Frontend: React app with user registration, login, and profile display features (using JWT auth and API integration).
- Backend: Node.js with Express API, user registration & authentication, password hashing, and JWT generation.
- Database: PostgreSQL with Dockerized environment and pgAdmin interface for local development and inspection.
- DevOps: Docker Compose setup for multi-container orchestration including frontend, backend, and database services.
- Security & Best Practices: Configured environment variables, error handling, and user validation (e.g., duplicate user prevention).

Software Engineer | CapEd Credit Union | June 2023 – Present

· Designed and executed backend data processing workflows using Databricks (Spark SQL) for downstream systems and reporting.
· Leveraged Microsoft Azure as the centralized storage layer for intermediate and finalized data process.
· Migrated extract generation from legacy SQL Server–bound execution to Databricks cluster-based processing, enabling parallelism and improved scalability.
· Utilized Databricks clusters to execute compute-intensive SQL transformations that were impractical to run efficiently on traditional relational databases.
· Reduced load on transactional SQL Server systems by offloading heavy extract and transformation workloads to cloud-based processing.

Application Development Engineer | Micron Technology | May 2016 – Feb 2023

- Developed scalable ETL pipelines using Python, reducing data processing times by 25%.
- Consolidated disparate data sets, creating cohesive data visualizations with Tableau to drive business insights, improving operational decision-making by 20%.
- Designed and maintained data warehouses to support business intelligence operations, enabling ad-hoc strategic analysis across departments.
- Built Python libraries to automate data cleaning, increasing data quality by addressing structural errors, duplicates, and outliers, reducing errors by 20%.

MASTER'S PROJECT | BOISE STATE UNIVERSITY| AUG 2017 – FALL 2021

- Developed techniques to identify malware, focusing on the challenges posed by its polymorphic nature. We employed a graph-based approach that extracts control flow graphs from Android APK binaries. To process these graphs, we utilized a novel graph representation learning method called Inferential SIR-GN, designed to preserve structural similarities. This technique was applied to MALNET, a publicly available cybersecurity database. By leveraging Inferential SIR-GN, we created representations of malware evolution to train an XGBoost classifier, improving the accuracy of malware classification tasks when the training and testing datasets were split based on the binary creation date. Our procedure successfully predicted certain polymorphic malware evolutions.