BRIAN ESPINOZA

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EXPERIENCE

Lead Engineer - Military Services   March 2018 – Present
Quandis Inc.   *Rancho Santa Margarita, CA*

- Spearheaded the design and execution of a scalable gRPC-capable service; enabling our team to decommission an existing non-scalable solution. Wrote the protocol buffer definitions and the streaming endpoints associated with the application server; also created client packages for easy adoption.
- Employed C#/.NET in crafting a REST API that integrates with DOD services, delivering immediate Military verification to our clientele. This involved the creation of an SDK and a backend session manager as an IHostedService, utilizing EntityFramework as the ORM to establish a connection with an MSSQL database. This initiative contributed to generating an additional annual revenue of $300K.
- Overcame significant latency issues tied to our central "Name Permutation" feature by re-engineering it to function completely in memory, integrating AsyncEnumerable patterns, and eliminating database read/write operations. This enhancement increased throughput and cut latency up to 60% for large name collections.
- Introduced a HealthCheckService complemented by A/B load testing for new releases and routine checks of public endpoints. This enhanced application oversight and minimized post-deployment issues.

Software Engineer   *November 2016 - March 2018*

- Developed a redaction feature that scans PDF data streams, buffers patterns resembling SSNs and DOBs, then removes and reassembles the data. This buffering solution fortified system security, mitigating unintentional sensitive data exposure.
- Enhanced the order upload page using JavaScript and jQuery, allowing for multiple PDF package orders with distinct processing options. Integrated intuitive "plus/minus" buttons for package adjustment, leading to positive customer feedback and streamlined testing.

PROJECTS

cookbook.io | *Python, Flask, AWS S3, Kafka, C++, PostgreSQL, Docker*   June 2023 – Present

- Wrote a REST API using Python, Flask, and SQLAlchemy that allows users to perform CRUD operations on recipe data stored on a PostgreSQL DB.
- Developed an OCR interface in C++ that allows users to digitize their cookbooks by using Google's Tesseract OCR for text extraction and OpenAI's API for data cleaning/parsing.
- Facilitated service communication by creating a dedicated Apache Kafka service broker; allowing dedicated services to monitor specific topics as resources become available.

EDUCATION

University of California, Irvine   Irvine, CA
Sociology B.Sc., Minor in Statistics   *Co. 2016*

Undergraduate Research Assistant   Irvine, CA
Networks, Computation, and Social Dynamics Lab   *Oct 2015 – Oct 2016*

Used R and MySQL to clean Twitter data.
Created data apps and data visualizations on RShiny and D3.js. Presented at INSNA Sunbelt Conference.

TECHNICAL SKILLS

Languages: C#, Python, Javascript, JavaScript, HTML/CSS, R
Databases: MS SQL, PostgreSQL, MySQL
Frameworks and DevTools: .NET, NET Framework, XUnit, Flask, Apache Kafka, Git, Docker
Cloud Platforms: AWS (EC2, S3, SQS, SNS, API Gateway), Azure CI pipelines, Application Insights
Core Competencies: Full-Stack Development, Software Architecture, Object-Oriented Programming