

Julio Gonzalez Garcia

(805) 554-2773 | julio.gonzalezgarcia0@gmail.com

Full-Stack Systems Developer & DBA

Specialization: Architecting scalable, data-driven applications and automated infrastructure.

Key Impact: Optimized SQL performance by 95%; engineered real-time WebSockets/SSE streaming; developed Python/PowerShell-based automation for large-scale system monitoring and deployment.

Technical Skills

- **Languages:** Python, TypeScript, C#, SQL (T-SQL), PowerShell, Bash
 - **Web & Real-Time:** Next.js, React, WebSockets, Server-Sent Events (SSE), Node.js, iron-session, HTML5
 - **Databases & Infrastructure:** SQL Server (SSMS, Agent, ETL), Oracle, SQLite, IIS, Docker (Containerization), GitHub, Git, Windows/Linux
 - **Testing & QA:** Vitest (Unit Testing), Mocha, Selenium (E2E Testing)
 - **DevOps & Tools:** CI/CD (Git-based deployment), System Monitoring, API Integration, PyInstaller, Inno Setup
-

Professional Experience

COUNTY OF SANTA BARBARA | Santa Barbara, CA

EDP Systems and Programming Analyst II | *Dec 2023 – Present*

- **Full-Stack Development:** Architecting a modern web application using Next.js, implementing scalable frontend components, middleware, and a robust backend connected to SQL Server.
- **Real-Time Systems:** Engineered real-time user interaction features using WebSockets to enable concurrent, live updates across different application pages.
- **Security & Authentication:** Implemented secure session management using iron-session, integrating complex authentication flows between IIS (NTLM) and the web application.
- **Database Engineering & Optimization:**
 - Designed a high-performance SQL backend search for millions of archived documents, reducing query response time to under 2 seconds.
 - Developed automated SQL scripts for index fragmentation monitoring and automatic rebuilds, reducing weekly performance incidents by ~30%.

- **DevOps & Automation:**
 - Built automated batch/PowerShell scripts to push SQL object changes (Stored Procedures, Views, Tables) to GitHub, enabling version control and reducing disaster recovery time from hours to under 10 minutes.

SANTA MARIA JOINT UNION HIGH SCHOOL | Santa Maria, CA
Student Information Systems Analyst | Sep 2021 – Dec 2023

- Managed and maintained large-scale Student Information Systems (SIS), ensuring data integrity through regular database maintenance and performance tuning.
 - Collaborated with administration to plan and implement system upgrades and architecture changes.
-

Selected Projects

Workload Equalization | Next.js, WebSockets, SQL Server

- **Workload Distribution:** Designed and developed an internal workload equalizer application that enables staff to assign incoming applications more efficiently by identifying the next worker in rotation, ensuring balanced workload distribution across the team.

Real-Time System Status Dashboard | Next.js, Server-Sent Events (SSE), SQL Server

- **Live Monitoring Architecture:** Developed a centralized status dashboard (inspired by status.openai.com) using Next.js and SSE to provide real-time infrastructure visibility to staff.
- **Automated Event Streaming:** Engineered a backend process that monitors database logs for service disruptions and pushes instant updates to all connected clients via SSE, eliminating the need for manual page refreshes.

Full-Stack ID Card Creation System | Python, CustomTkinter, SQLite, REST API

- **Software Engineering:** Engineered a standalone Windows application (packaged via PyInstaller/Inno Setup) featuring a drag-and-drop canvas, barcode generation, and live template previews.
 - **Distributed Systems:** Built and integrated a REST API server to synchronize templates and images across multiple school districts, implementing secure API key authentication and background threading.
 - **Data Architecture:** Designed a normalized SQLite schema to manage multi-school data layers, enabling seamless synchronization between Aeries SIS and manual entries.
-

Education

CALIFORNIA POLYTECHNIC STATE UNIVERSITY | San Luis Obispo, CA
Bachelor of Science (B.S.) in Computer Science | *Jun 2021*

- **Relevant Coursework:** Software Engineering, Design & Analysis of Algorithms, Database Systems, Technical Writing