James Zhang

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Github | LinkedIn

Work Authorization: US Citizen

Professional Summary

Database-focused Full-Stack Developer with 20+ years of experience studying and working with **relational databases (PostgreSQL, MySQL)**. Skilled in **ER modeling**, **schema design/normalization**, **SQL & query optimization**, and **database maintenance** (backups, migrations, indexing, integrity). Builds data-driven applications where every feature starts with the data model. Background in accounting and e-commerce enables practical, reliable solutions for real-world operations.

Technical Skills

- **Relational Databases:** PostgreSQL, MySQL, SQL, SQLAlchemy; ER diagrams; 3NF normalization; constraints & FKs; transactions; indexing; performance tuning; backup/restore; migrations; seed data; recovery testing
- **Frontend Development**: HTML5, CSS, React, Bootstrap
- **Back End:** Python (Flask, Django), RESTful APIs, authentication/authorization.Tools: Git, GitHub, Docker, AWS
- **Cloud/DevOps:** Docker, AWS (EC2/S3 basics), Git, CI-friendly workflows.

Projects

Repair_or_replace-back_end - Github

- Backend system for homeowners/landlords to track appliances, repairs, and investments.
- Designed **PostgreSQL relational schema** & **ER diagram** (Properties, Appliances, Repairs, Investments); enforced integrity with FKs/constraints.
- Implemented CRUD and **indexed reporting queries** for cost analysis; REST API for front-end use.
- **Tech:** Python, Flask/Django, SQLAlchemy, PostgreSQL, REST.

E-commerce Platform - Github

- Full-featured store (registration/login, cart, checkout, order history) **driven by a MySQL schema**.
- Built **ER model** (Users, Products, Orders, Payments); normalized tables for scalability & consistency.
- Implemented transactions and analytics queries for order KPIs and user activity.
- **Tech:** Flask, React, MySQL/SQL, AWS, Docker.

Library Management System - Github

- Registration, borrowing/returns, and inventory powered by a **relational data model**.
- Designed **ER diagram** (Members, Books, BorrowRecords, Inventory); created procedures for **backups and integrity checks**.
- All functions (borrow/return, penalties, inventory updates) implemented via structured SQL queries.
- **Tech:** Python, SQL.

Professional Experience

Software Engineer Trainee — Coding Temple (Remote) | 05/2024 – Present

- Designed **relational schemas** and **ER diagrams** across multiple projects; applied normalization and constraints.
- Improved performance with **query optimization & indexing** (EXPLAIN/ANALYZE, coverage indexes).
- Built REST APIs on top of relational models; all app features are **database-driven** (auth, cart/checkout, reporting).
- Established **database maintenance**: backups, migrations, seed data, and recovery tests.
- Deployed services via **Docker + AWS**; ensured reliable, repeatable DB migrations.

Administrative Assistant

John H Wu Medical Office, San Francisco, CA | 01/2021 – 12/2022

- Introduced a document management system, improving efficiency by 20%.
- Streamlined administrative workflows using Excel/PowerPoint.
- Maintained patient database, ensuring accuracy, confidentiality (HIPAA-minded), and reliable record retrieval.

E-Commerce Business Owner

Self-Employed, San Francisco, CA | 06/2014 – 09/2020

- Built and managed an online platform for educational material sales; achieved $400,000+ revenue.
- Ran campaigns with Shopify & Google Ads to improve engagement.
- Maintained customer database, tracking orders, payments, and communications to increase retention.

Education

Coding Temple Software Engineering Bootcamp

Certificate of Completion | Backend Specialization | December 2024

- Mastered Python, Flask, React, SQL, and GraphQL.
- Focused on database-driven applications (PostgreSQL/MySQL, ER modeling, schema design, SQL optimization) and full-stack development (Flask/Django, React).

Devry University, Oakland, CA

Master of Accounting & Financial Management | 2013

- **Focused on data analysis and financial modeling**.

Certifications

- Coding Temple Full-Stack Software Engineering Certificate (2024)
- Master of Accounting & Financial Management (2013)