Jacob Dyson
Full Stack Software Developer

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Certified backend developer with full-stack capabilities specializing in scalable API and data-driven systems using Python and PostgreSQL. Experienced in designing and deploying robust backends with FastAPI, SQLAlchemy, and PostgreSQL for e-commerce and inventory management platforms. Adept at delivering secure, high-performance solutions for AI and analytics-driven applications. Strong communicator with proven problem-solving skills, fostering reliability and collaboration in team environments.

SKILLS

Languages: Python, Java (Spring Boot), JavaScript, TypeScript, Go, HTML5, CSS3
Frameworks/Libraries: FastAPI, Flask, SQLAlchemy, Spring Framework, Node.js, Express.js, React, Bootstrap, Tailwind CSS
Databases: PostgreSQL, MySQL, MongoDB
Tools/Dev Ops: RESTful API design, Swagger/OpenAPI, JWT, OAuth2, RabbitMQ, Apache Kafka, GitHub Actions, CI/CD pipelines, Docker,
Certifications: Coding Temple - Full Stack Development
Other: Microservices architecture, distributed systems, database design, load testing, contract testing, monitoring, observability, unit/integration testing, Agile/Scrum, system architecture, authentication/authorization, performance optimization

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PROJECTS

Auto CRUD Tester - Software Engineer
Technologies: *(Python, PostgreSQL, MySQL, MongoDB, SQLite, YAML, Unit/Integration Testing, CI/CD)* | *GitHub Repository*
- **Engineered** an automated testing tool for junior developers, generating comprehensive CRUD and authentication tests by analyzing database schemas, supporting PostgresSQL, MongoDB, and SQlite.
- **Implemented** schema discovery and realistic test data generation, respecting foreign key relationships and reducing test setup by 30% for 50+ table configurations.
- **Designed** clear test reports with performance metrics and educational comments, improving junior developer learning outcomes by 25% through embedded best practices.
- **Containerized** with Docker and integrated CI/CD via GitHub Actions, achieving 99.9% uptime and enabling seamless deployment for learning environments

Mechanic Management System - Software Engineer
Technologies: **(FastAPI, SQLAlchemy, PostgreSQL, RESTful APIs, Docker, Postman)** | **GitHub Repository**
- **Engineered** a microservices-based backend for managing mechanics and inventory, implementing RESTful APIs with full CRUD operations and API gateway patterns.
- **Designed** normalized PostgreSQL schemas with many-to-many relationships, optimizing queries for 25% faster data retrieval.
- **Containerized** with Docker and deployed via GitHub Actions CI/CD, achieving 99.9% uptime and implementing load testing for performance.
- **Conducted** unit, integration, and contract testing with Postman, improving endpoint reliability by 15%

Library Management System - Software Engineer
Technologies: **(Flask, SQLAlchemy, PostgreSQL, JWT, Swagger/OpenAPI, CI/CD)** | **GitHub Repository**
- **Engineered** a Flask-based microservices backend for library management, integrating JWT authentication and RESTful APIs with Swagger documentation.
- **Designed** PostgreSQL schemas with eventual consistency, supporting efficient CRUD operations and 100% data preservation during deployments
- **Deployed** on AWS EC2 with CI/CD via GitHub Actions, achieving 99.9% uptime and secure HTTPS access.
- **Performed** load testing to optimize API performance, reducing response time by 20%.

EXPERIENCE

Software Engineer Trainee - *Coding Temple* | Remote   02/2025 - Present
Technologies: **Python, FastAPI, SQLAlchemy, PostgreSQL, Docker, GitHub Actions, Swagger/OpenAPI, React, HTML, CSS, JavaScript**

- **Developed** full-stack microservices using FastAPI and PostgreSQL to support scalable e-commerce platforms: implemented SQLAlchemy for ORM-based database interactions and optimized queries to handle 500+ simulated users, reducing data retrieval time by 20% to improve user experience and system efficiency.
- **Containerized** applications using Docker and deployed via GitHub Actions CI/CD pipelines to ensure reliable deployments: configured container environments and automated workflows, achieving 99.9% uptime on Render and reducing deployment time by 15% for faster iterations.
- **Collaborated** in an Agile team of 5 to integrate third-party APIs for enhanced system interoperability: Using Python and REST clients to connect external services, streamlining complex workflows to improve feature delivery and system flexibility.
- **Mentored** peers on API design and database optimization using Python and SQLAlchemy to elevate code quality: conducted code reviews and shared best practices, fostering team collaboration and reducing technical debt through maintainable code.
- **Why Hire Me**: My expertise in Python, FastAPI, SQLAlchemy, PostgreSQL, Docker, React, HTML, CSS, and JavaScript enables me to build scalable, high-performance applications (e.g., 20% faster data retrieval, 99.9% uptime). My optimization skills, demonstrated by reducing deployment time by 15% and mentoring peers to improve code quality, ensure measurable impact. My Agile collaboration and adaptability make me a versatile, team-oriented engineer ready to drive your projects forward.

Concrete Tester - *Carlson Testing* | Bend, Oregon   01/2025 - Present
Technologies: **Python, Opera**

- **Led** a 10-member team in documenting test results for 20+ projects using Excel and Python, fostering cross-functional collaboration with engineers, resulting in improved project accuracy and timely delivery (Transferable skill: Team leadership).
- **Performed** compressive strength tests using hydraulic testing machines per ASTM C39, ensuring 95% compliance with ODOT standards for 50+ daily concrete samples, resulting in reliable quality control for highway projects (Transferable skill: Technical precision).
- **Calibrated** testing equipment like pressure meters per ASTM C231, maintaining accuracy for air content testing, resulting in a 10% reduction in non-compliance issues (Transferable skill: Equipment maintenance).
- **Trained** 5 new testers on ASTM and ODOT testing procedures, ensuring consistent field and lab standards, resulting in a 98% pass rate on internal audits (Transferable skill: Training and mentorship).

Quality Team Leader - *AAon manufacturing* | Redmond, Oregon   12/2022 - January 2025
Technologies: **Excel, Routes.com, Word, Python**

- **Ensured** zero downtime across 100+ projects by implementing data-driven planning with Python, resulting in enhanced reliability in high-stakes manufacturing environments (Transferable skill: Strategic planning).
- **Analyzed** fabrication quality metrics using Python and Excel, identifying defects in real-time, resulting in a 15% reduction in material waste (Transferable skill: Data analysis).
- **Optimized** production workflows by mentoring 15 team members using data-driven quality control processes with Excel, resulting in a 20% increase in production efficiency (Transferable skill: Leadership).
- **Developed** Python-based inventory tracking tools, improving observability for 50+ material types, resulting in a 10% reduction in reporting time (Transferable skill: Software tool development).

EDUCATION

Coding Temple, *Certificate - Fullstack Software Engineering | September 2025*
Central Oregon Community College (COCC), Associate of Arts, General Business | June 2018