

# KOURTNEY MIRANDA

Software Engineer | Backend / Full Stack Development | AI & Cloud Systems

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[LinkedIn](#)

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## Summary

Software Engineer with hands-on experience developing and deploying scalable applications across frontend, backend, and cloud environments. Skilled in React, Node.js, Python, and PostgreSQL, with a growing interest in machine learning, distributed systems, and product innovation. Proven ability to build user-centric solutions, collaborate across disciplines, and adapt quickly to new technologies. Passionate about impactful software that connects people and enhances everyday experiences. Seeking an entry level role and grow into a long-term contributor.

## Core Competencies & Skills

- Python • JavaScript • ES6+ • TypeScript • Swift • Java • SQL • HTML5 • CSS3 • Bash • React • Node.js • Express.js • Flask • Tailwind CSS
- RESTful APIs • PostgreSQL • NoSQL • SQLite • AWS • EC2 • AWS S3 • AWS IAM • Docker • GitHub Actions • Terraform • CI/CD Pipelines
- OpenAI API • TensorFlow • LLM Integration • Data Modeling • Git • GitHub • Jira • Confluence • Slack • Figma • Object-Oriented Design
- Data Structures & Algorithms • API Integration • System Scalability • Code Optimization

## Experience

### **Catalyze - Software Engineer Intern/Apprentice**

**Bellevue, WA Aug 2025 - Present**

- Developed and deployed RESTful APIs using Python (Flask) and PostgreSQL, supporting real-time data retrieval for internal tools, which reduced response latency by 28%.
- Implemented CI/CD pipelines in GitHub Actions, automating testing and deployment workflows, cutting manual deployment effort by 40%.
- Built containerized microservices with Docker and deployed them to AWS EC2 environments, improving scalability and uptime to 99.9%.
- Collaborated with senior engineers to implement Terraform infrastructure as code (IaC) modules for environment provisioning, reducing setup time from 3 hours to 30 minutes.
- Developed and tested UI components in React and TypeScript, improving frontend load time by 22% through optimized rendering and modular design.
- Authored technical documentation, runbooks, and spike reports to support cross-team knowledge sharing and deployment consistency.

### **Amazon - Business Optimization Manager**

**Bellevue, WA Feb 2022 – Nov 2024**

- Designed and deployed React + Python + SQL automation tools, reducing handling time for seller support cases by 35%.
- Built LLM-powered chat workflows for global seller support, cutting manual ticket volume by 25% and improving resolution rates by 20%.
- Developed SQL-powered Tableau dashboards integrating multi-system datasets, improving decision-making visibility by 35%.
- Automated QA processes with Python scripts, reducing manual validation workload by 40%.
- Decreased ticket volume by 30% by leading prompt quality testing, localization workflows, and automated support documentation updates for 8 global marketplaces.
- Led cross-functional efforts to deliver a global support automation suite projected to save \$1.2M+ annually, while increasing seller satisfaction scores.

### **County of San Diego - Program Manager**

**San Diego, CA Jan 2020 – Nov 2021**

- Designed and implemented Tableau dashboards and SQL-based pipelines to reduce manual reporting by 70%.
- Built predictive behavior models for public service teams, improving customer engagement and reducing manual ticket handling.
- Conducted qualitative and quantitative data quality reviews, identifying issues and improving integrity by 25%.
- Supported multi-stakeholder business reviews with dynamic reporting, ensuring accurate decision-making.
- Integrated 6 platforms into a unified analytics system, enabling team-wide visibility across customer engagement KPIs.
- Developed automated financial workflows in SQL/VBA, cutting month-end processing from 6 days to 1.5 days.
- Optimized legacy queries and migrated them to a scalable architecture, improving processing time by 92%.
- Automated core government data systems to streamline internal service reporting, cutting cycle times by 40%.

## Projects

### **E~Commerce Automation: AI Chatbot Suite**

[Live Demo](#) | React, Tailwind CSS, OpenAI API, Prompt Engineering. Designed and deployed a suite of 4 chatbots simulating e-commerce automation using LLM logic • Buyer Bot – Handles order FAQs, returns, and shipment queries • Seller Bot – Automates product listing,

fulfillment, and policy guidance • Review Bot – Generates GPT-based reviews and summary pros/cons • Prompt Playground – Allows prompt testing in various tones and use cases • Includes prompt documentation, API fallback logic, and responsive UI.

#### **BIAS Lab: AI-Powered Bias Detection Tool**

[Live Demo](#) | React, Tailwind CSS, OpenAI API, Python (Flask), PostgreSQL. A full-stack app that analyzes news articles in real-time to detect potential bias and framing choices in journalism • Built interactive web app for identifying and analyzing bias in AI-generated content • Integrated custom prompts with OpenAI API to classify, flag, and recommend bias mitigation strategies • Developed backend services in Flask with PostgreSQL for data logging and analytics • Designed responsive UI with real-time bias scoring and feedback.

#### **WanderLyst : Trip Planner App**

[Live Demo](#) | React, Express, PostgreSQL, Node.js, JWT Auth, CSS Modules. Collaborative full-stack travel planning tool for shared trip boards, task assignments, and event organization • Custom PostgreSQL schema for trips, users, tasks, events, and comments • Backend built with RESTful routes and user-based access control • Frontend includes dashboard views, task lists, voting logic, and event management • Includes role-based access for trip members, modular React components, and secure endpoints.

#### **Book Buddy : Digital Book Reservation App**

[Live Demo](#) | React, React Router, Express.js, Node.js, PostgreSQL, Vite, JWT Auth. A full-stack digital book reservation app with authentication and real-time catalog updates • User registration/login, protected account view, secure book reservation system • Backend includes RESTful API, PostgreSQL database, Express routes, and JWT-based user auth • Frontend includes React-based routing, dark mode UI, and dynamic book detail rendering.

### **Education**

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#### **University of Michigan: Full Stack Software Engineering Immersive**

**Nov 2024 – Nov 2025**

Graduate in Software Engineering

#### **University of California San Diego**

**Jun 2016 – Jun 2020**

BS in Computer Science