

# JASON MONROE



jason@jasonmonroe.com



(310) 751-0578



@jasonmonroe



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## PROFESSIONAL SUMMARY

Senior Full Stack Engineer with over 15 years of experience designing scalable, high-performance enterprise systems for global brands. Expert in PHP/Laravel ecosystems, Python and API-driven infrastructures. Experienced collaborating across frontend and backend teams and contributing to application architecture, database design, and cloud deployments using AWS services including EC2, S3, RDS, Lambda, and SQS.

Proven track record in reducing technical debt, improving system reliability by up to 40%, and translating complex business requirements into production-ready roadmaps. Recently specialized in integrating Generative AI, RAG pipelines, and Agentic workflows into enterprise environments to drive data-driven innovation.



## TECHNICAL SKILLS

- **Languages:** PHP, Javascript, Typescript, Python, JQuery, SQL, YAML
- **Frontend:** React, Angular
- **Backend & Architecture:** Laravel, Symfony, Microservices, Event-Driven Design, REST/GraphQL APIs
- **Cloud & DevOps:** AWS (EC2, S3, RDS, Lambda), Docker, Kubernetes, CI/CD (Jenkins, Bamboo), SonarQube
- **Data & AI/ML:** PostgreSQL, MySQL, Redis, Elasticsearch, LangChain, RAG Pipelines, TensorFlow, Scikit-learn
- **Tools:** Git, SVN, JIRA, Confluence, Sentry, DataDog, OpenSearch



## PROFESSIONAL EXPERIENCE

### Backend Engineer | Avid AI (contract) - Plano, Texas

Apr 2025 - Jul 2025

Developed backend systems for a non-profit fundraising platform serving 3,000+ clients.

- Developed and optimized backend systems, integrating 32+ vendor APIs (e.g., HubSpot, Google AdSense, CensusIQ) to enhance functionality.
- Engineered scalable backend architectures for AI-driven applications, focusing on high-availability and performance.
- Developed secure API integrations and data pipelines to support large-scale language model (LLM) implementations.

### Software Developer | Apex Systems (contract) - Costa Mesa, California (remote)

Jul 2024 - Nov 2024

Enhanced a WordPress-based platform for rare coin collection and auctioneering.

- Stabilized core financial fundraising modules by resolving architectural bottlenecks, decreasing system downtime by an estimated 15%.
- Architected Implemented server-side processes for coinage identification in Python.
- Authored technical specifications and security protocols in Confluence, standardizing engineering governance and reducing developer onboarding time.
- Collaborated with UI/UX and DevOps to deploy secure debt-relief portals for 5,000+ clients, maintaining 100% financial compliance.

- (OOP) principles. Optimized SQL database structures through normalization and indexing, resulting in a 40% improvement in query speed.
- Automated analytics pipelines using cronjobs and scripting, reducing manual processes by 60%.

## Software Engineer IV | Hilti Group - Plano, Texas

Jan 2021 - May 2024

Architected Ask Hilti™, a SaaS platform serving 59,000+ monthly users for customer education and sales.

- Improved system performance and SEO by reducing page load times by ~50%.
- Developed and maintained a scalable SaaS platform, increasing user registrations by 142% via SEO and sitemap generation strategies.
- Optimized database performance by restructuring complex queries and indexing strategies, resulting in a 40% improvement in system response times.
- Designed asynchronous processing systems for media optimization using AWS SQS/SNS, reducing page load times by ~50%.
- Led CI/CD pipeline optimization and conducted weekly code reviews, enforcing strict Agile and security best practices across the team.
- Increased unit test coverage from 47.3% to 78.9% using IntelliJ Ultimate and SonarQube.
- Architected and managed a high-traffic e-commerce platform supporting 59,000+ monthly active users and 450+ global administrators.

## Software Engineer Consultant | Robert Half Technology - Dallas, Texas

Aug 2016 - Mar 2017

Optimized applications for clients: Monkedia® and Cantoni Furniture®.

- Created an intranet administrator portal (from scratch) for employee operations that managed and indexed all products, inventory, projections and sales that increased user performance and reduced redundant activities.
- Implemented caching and database indexing and caching for a faster and more optimized data warehouse.
- Improved API response times for analytics dashboards, reducing load times and removing 40% of redundant functionality, leading to faster data processing.
- Integrated Facebook Graph API, increasing user engagement by 15%.

## Software Developer & Manager | Cognizant - College Station, Texas; Beaverton, Oregon; Manhattan, NY

Jun 2014- May 2016

Developed financial and automation solutions for global brands American Express and Nike.

- Managed three clients and worked with offshore team in Chennai, India for team meetings and transitions.
- Built automation tools, reducing Tableau Enterprise load times by 30%.
- Increased unit test coverage from 47% to 79% using SonarQube, significantly reducing production regressions.
- Ensured global accessibility compliance (ADA and EAA standards) for enterprise web applications.
- Led distributed teams and implemented Jenkins CI/CD pipelines for efficient deployments.
- Reviewed business metrics to ensure data integrity.



## AI & MACHING LEARNING PROJECTS

- **Smart Nutricare Disorder Agent:** Developed an Agentic AI Retrieval-Augmented Generation (RAG) application using LangChain and LangGraph to analyze medical datasets and generate diagnostic insights through intelligent workflow orchestration. *Published on Huggingface*
- **Banking Churn Predictor:** Designed and deployed a customer churn prediction model using TensorFlow and Keras to identify high-risk banking customers and improve retention analysis through supervised machine learning classification.

- **Plant Seedling Classifier:** Built a deep learning computer vision model for plant species classification using Convolutional Neural Networks (CNNs), including image preprocessing, exploratory data analysis, data augmentation, transfer learning, model training, and evaluation for improved classification accuracy.



## EDUCATION

### **Post Graduate Program in Artificial Intelligence and Machine Learning** | University of Texas-Austin, McCombs School of Business (Remote)

Jun 2025 - Jan 2026

- **Emphasis:** Generative AI for Natural Language Processing Program | GPA: 3.83
- **Courses:** Generative AI Foundations, Advanced Generative AI

May 2024 – Mar 2025

- **Emphasis:** Business Applications of Artificial Intelligence/Machine Learning | GPA: 3.56
- **Courses:** Machine Learning, Advanced Machine Learning, Computer Vision, Natural Language Processing, Neural Networks, Python Foundations

### **Bachelor of Arts in Animation & Media Arts** | Art Institute of California-Los Angeles

Jul 2004 - May 2008

### **Bachelor of Arts in Computer Science, Minor in Information Science & Learning Technologies** | University of Missouri-Columbia

Sep 1999 - May 2004