

Rudy Pena

Staff Software Engineer | AI Platform & Agent Systems | AWS Bedrock, MCP

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SUMMARY

Staff-level engineer specializing in building secure, identity-aware AI platforms and agent ecosystems on AWS. Experienced in designing scalable runtime architectures, enabling self-service agent development, and integrating LLM-driven workflows into production systems. Strong background in platform engineering, distributed systems, and developer tooling.

WORK EXPERIENCE

Staff Software Engineer, AI Platform — DTN - March/2022 - Present - Austin, TX

- **Led the design and implementation of a secure, identity-aware AI/agent platform on AWS**, enabling teams to rapidly prototype and deploy agent-driven workflows using both shared and custom MCP tooling.
- **Architected an agent ecosystem integrated with enterprise identity (Auth0)**, implementing custom authentication and authorization flows bridging internal IDP with AWS AgentCore to ensure secure, scoped access to agents and tools.
- **Designed a secure execution layer for agent runtimes**, leveraging API Gateway, WAF, Lambda authorizers, and proxy services to route requests to dynamically resolved agent and MCP runtimes, ensuring isolation and controlled access across environments.
- **Defined and implemented a runtime model and deployment strategy** for both agent and MCP services using AWS AgentCore, enabling consistent, scalable deployment and lifecycle management of AI-powered services.
- **Evolved the organization's AI approach** from a centralized ChatGPT-style embedded experience into a **self-service agent platform**, empowering teams to independently build, configure, and deploy agents within their own applications.

- **Built a Python-based CLI/SDK** to bootstrap agent services, standardize configurations, and accelerate onboarding, significantly reducing time-to-prototype for new AI use cases.
- **Developed multiple Next.js applications** providing a UI layer for agent creation, configuration, and interaction, enabling broad adoption of AI capabilities across engineering and product teams.
- **Integrated distributed AWS infrastructure** including Lambda, ECR, Aurora/Postgres, S3, and OpenSearch to support scalable, production-grade AI workloads and retrieval systems.
- **Delivered production AI features using AWS Bedrock (Claude, Titan)** to summarize, analyze, and generate insights from large datasets, directly impacting DTN's Grain Intelligence platform.

Software Engineer III, Anaconda, Inc. - *March/2019 - March/2022* - Austin, TX

- Built and shipped core features for Anaconda.com using Angular and FastAPI, contributing to a platform used by millions of developers.
- Led migration from Karma to Jest, increasing test coverage from **2% to 60%**, significantly improving reliability and release confidence.
- Drove MVP initiatives that resulted in ~40% of current product offerings, including partnerships with HP, Snowflake, and Microsoft.
- Introduced hypothesis-driven development practices to better understand user behavior in the absence of a dedicated UX team.

Senior UI Developer, IBM, Inc. - *August/2018 - March/2019* - Austin, TX

- Developed ~40% of IBM's internal component library using Angular, improving development consistency across global teams.
- Led coordination between Austin and India teams, breaking down epics and distributing work for MVP delivery..

Software Engineer, Bitfusion, Inc. - *September/2017 - August/2018* - Austin, TX

- Built CLI tooling for managing distributed ML workloads using Go (Cobra, Viper), enabling users to orchestrate training jobs and clusters.
- Developed full-stack features using Golang, Node.js, and React to visualize and manage machine learning workloads.

Front End Engineer, IBM - *September/2015 - September/2017* - Austin, TX

- Built frontend experiences for IBM Hybrid Cloud solutions using Vue.js and internal frameworks.
- Collaborated with design and research teams to improve user experience across enterprise products.

Software Engineer, Stretch - *July/2014 - September/2015* - Austin, TX

- Migrated legacy Django infrastructure to a modern single-page application using Backbone.js and Webpack.

Software Engineer, Sports195 - *Oct/2013 - June/2014* - Austin, TX

- Developed features for a hybrid mobile platform using Node.js, Rendr, and Scala.

TECHNICAL SKILLS

AI / LLM Platforms:

AWS Bedrock (Claude, Titan), AgentCore, MCP Tooling, RAG Pipelines, Vector Search (S3, OpenSearch), Prompt Orchestration, Agent Workflows

Cloud & Infrastructure:

AWS (Lambda, API Gateway, WAF, ECR, S3, Aurora/Postgres), Distributed Systems, Runtime Architecture, Secure API Design, Identity & Access Integration (Auth0 / IDP)

Languages:

Golang, Python, TypeScript, JavaScript

Frameworks & APIs:

React, Next.js, Angular, FastAPI, FastMCP, Express, NestJS,

Platform & Tooling:

Docker, Kubernetes, CI/CD (GitLab), CLI/SDK Development, Lerna, Webpack, Shadcn

EDUCATION

2008 B.S. in Advertising, University of Texas at Austin

Nanodegree (Udacity), Self Driving Car Engineer