

PATRICIA (PATTI) DEGNER

Senior Software Engineer | AWS Infrastructure and Data Platforms | Agentic AI
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SUMMARY

Senior Software Engineer with experience building production backend systems, cloud infrastructure, and data platforms on AWS. Expertise in Python, CDK, CI/CD, and developer tooling, with recent experience building agentic AI systems that automate software engineering workflows.

TECHNICAL SKILLS

AWS: CDK, Lambda, Step Functions, S3, Glue, Athena, SageMaker, RDS, DynamoDB, CloudWatch, EventBridge, SES, IAM, API Gateway, VPC, CodePipeline

Languages: Python, SQL, TypeScript, JavaScript

Data and ML: PySpark, Airflow, PyTorch, Pandas, Spark SQL, PostgreSQL

Agentic AI: LangGraph, Claude Agent SDK, Model Context Protocol (FastMCP), evaluation harnesses, tool scoping and guardrails

Platform: Infrastructure as code, CI/CD with GitHub Actions, automated testing, React and React Admin, cloud cost optimization

EXPERIENCE

Senior Developer, InfoBate - Pittsburgh, PA (remote)

Jun 2023 - Present

- Established the team's AWS CDK codebase in Python from scratch, defining the infrastructure as code patterns and CI/CD deployment pipeline the team uses daily; mentored engineers in CDK best practices.
- Designed, built, and automated production AWS data pipelines supporting daily reporting, bi-monthly analytics, and data ingestion workflows using Python, CDK, Lambda, Glue, SageMaker, S3, Step Functions, and Athena.
- Designed and built an internal multi-agent software engineering platform using LangGraph and Claude Agent SDK that converts natural-language requests into reviewed GitHub pull requests across three production repositories with human approval gates and tool-scoped guardrails.
- Reduced LLM token costs of the agentic workflow by approximately 25% by routing individual steps to the lowest-cost suitable model and validating behavior through a 42-test automated evaluation suite.
- Built an internal MCP server in Python (FastMCP) providing a persistent tagged note store, implementing tools, URI addressable resources, and reusable prompts; context and decisions survive across agent sessions.
- Partnered directly with customers to translate business requirements into shipped software. Owned backend development for client-facing features, including PostgreSQL schema design, query optimization, React Admin interfaces, and production database upgrades.
- Redesigned core data tables during onboarding, cutting a high traffic query from 10M+ rows to ~10K.
- Decommissioned an unused RDS database with misconfigured minimum compute after validating no downstream dependencies, eliminating ~\$1,400/month in cloud spend.

Software Development Engineer L4, Amazon - Louisville, CO (hybrid)

May 2022 - Mar 2023

- Scaled and optimized production AWS data pipelines processing over 2 million events daily for Amazon Go, improving reliability and operational efficiency.
- Designed and implemented a resumable Step Functions workflow using Lambda, SES, and API Gateway that eliminated redundant preprocessing and saved ~13 hours of compute per execution.
- Expanded test coverage to 80% of existing and 100% of new code; streamlined internal tooling in TypeScript and React.

Decision Scientist, Ibotta - Denver, CO (remote)

Jan 2021 - Apr 2022

- Automated recurring data collection and analysis in Airflow, saving ~\$36,000 annually.
- Migrated legacy workflows to PySpark and optimized the underlying algorithms, cutting runtime ~5 hours/week.
- Authored how-to guides for Airflow, PySpark, and SQL that cut ramp time for new decision scientists by half.

English Teacher, International Language Academy - Hanoi, Vietnam (onsite)

Jul 2017 - Sep 2018

- Taught technical and conversational material across a language barrier, building the habit of explaining complex ideas simply.

EDUCATION

University of California, Berkeley - Master of Information and Data Science

Dec 2020

Thesis: *Audio Super Resolution using Deep Learning.*

- Trained a spectrogram autoencoder in PyTorch on 85GB of audio to reconstruct high frequency content from compressed audio, served through a real time Flask interface. *Selected graduate ML coursework at pdegner.github.io*

University of Kansas - B.S. Supply Chain Management

May 2017