

Jacob Coleman

Columbus, Ohio

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Summary

Insatiably curious technologist seeking challenging position requiring rigorous problem solving ability, analytical expertise, innovative talent, and a high standard of development skills to transform businesses through technology, leading by example, and positive change.

Professional Experience

Jahnel Group - Schenectady, NY (Remote)

March 2023 to October 2023

Principal Software Engineer

AI Finance Decision Making Platform

Architected, implemented, and deployed numerous event-driven microservice-based systems across a broad range of client industries and across the three primary cloud providers (AWS, Azure, GCP) while leveraging DevOps, SRE, and Development best practices in Golang, Python, and C#.

- Guided and mentored individuals across the entire organization in programming, optimization, career growth, and decision making. Subjects ranged from, but were not limited to: clean architecture and code, concurrency, vectorization, transformers and embeddings, code organization, frameworks for navigating professional performance and career development, and how to frame and approach numerous and diverse problem spaces among many others.
- Established and used AWS Well-Architected Framework, Data Engineering, DevOps, SRE, and Security best practices to remediate current infrastructure and system design to follow latest Cloud standards and best practices while ensuring optimal cost-efficiency.
- Provided Cost Optimization techniques and tools, including internal solutions that range from LLM-based solution generators to full iterative processes leveraging tools such as Lambda Powertuning and others.
- Created end-to-end AWS cloud-native architecture for an AI decision making platform including reconciliation logic and actionable data.
- Leveraged Azure Databricks, Autoloader, Functions, Delta Tables, Unity Catalog, and Storage Containers for a clean and highly-performant client MVP related to EDI X12 Healthcare data and analysis in Python and C#.
- Reviewed and realigned a C# codebase for reliability and stability for when custom serial hardware is used in the field in the construction and materials industry.

Internally:

- Creator and champion of machine learning, data engineering, and prompt engineering Slack channels.

Jahnel Group - Schenectady, NY (Remote)

January 2022 to March 2023

Senior Site Reliability Engineer

Healthcare Revenue Lifecycle Management Platform

Audited a healthcare revenue lifecycle management platform in regards to software, cloud, and data best practices while also upgrading and realigning the entire stack for performance and innovation. Lead the architecture and engineering efforts and established documentation, best practices, and automation for fully CI/CD development.

- Performed full current state analysis and application audit for full scoping of work, including punch lists, risks, potential optimizations, and cost comparisons.
- Provided architectural guidance on data engineering, cloud engineering, and software development tasks and best practices from the beginning of data ingestion to the model endpoint feedback loop.
- Migrated CDK deployment system and IAC to GitHub Actions and SAM deployment system including all cloud-based resources, and isolated data and code to allow fully independent deployments.

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AI Finance Decision Making Platform

Audited an AI decision making platform system in regards to software, cloud, and data best practices while also upgrading and realigning the entire CI/CD stack to eliminate any form of development and deployment friction.

- Performed full current state analysis and application audit for full scoping of work, including punch lists, risks, potential optimizations, and cost comparisons.
- Provided architectural guidance on data engineering, cloud engineering, and software development tasks and best practices from the beginning of data ingestion to the model endpoint feedback loop.
- Upgraded Jenkins deployment system including versions, job names, job settings, and environment variable configurations.

Microsoft AAA Game Studio

Architected, implemented, maintained and continuously developed remediation and asset discovery tooling along with fully unattended automation to resolve a broad spectrum of issues within a AAA game studios AWS infrastructure as part of a two-man SRE tiger team.

- Established and used DevOps, SRE, and security best practices to remediate infrastructure at scale while handling over 500,000 requests per second and with zero downtime, all while exceeding Microsoft standards for security and remediation and achieving 100% success on all initiatives including multiple stretch goals.
- Provided dozens of robust Golang solutions for users to discover and remediate potential issues across all accounts, regions, and resources with minimal effort. These solutions cover security group CIDR ranges, at-rest and in-transit encryption, internal and client traffic security, caching systems, disk encryption, firewall rules, user permissions, and data security.
- Parallelized remediation efforts and Golang solutions by leveraging serverless state machine workflows and native Golang concurrency via wait groups and channels.
- Implemented fully unattended anomaly detection automation to provide hands-free remediation, error-checking, roll-back, and notification for TLS policy remediation while freeing up significant internal resources.

Internally:

- Implemented facial recognition in internal Jahnel Group stair tracking application for hands-free tracking and enrollment via serverless architecture, winning 2022 Jahnel Group Hackathon.
- Automated, cost-optimized, and significantly improved the performance of the internal Jahnel Group time tracking application for company wide contractor use.

NetJets - Columbus, OH (Remote)

March 2021 to December 2021

Senior Model Engineer

Architected, implemented, maintained and continuously developed financial analyses, Monte Carlo simulations, machine learning models, and all relevant infrastructure including architecture, proof of concept, data, model, code, containers, and pipelines for fully autonomous build, deploy, and execution.

- Parallelized simulation processes, collapsing serial model execution times by an average of 150x and providing actionable output within minutes relative to days.
- Decoupled numerous monoliths into microservices, leveraging state machines for orchestration and event-driven architecture to allow the creation of replaceable components, providing a fully serverless backbone for simulation and model execution.

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- Created and automated data ingestion, ETL, and aggregation processes from disparate data sources into an AWS data lake, Snowflake, and ERP software while automating all underlying components including code library updates, container builds, and execution by leveraging multiple automation suites and infrastructure as code.
- Established all standards and best practices regarding Amazon Web Services, CI/CD, DevOps, and Python to create a full data and modeling ecosystem that provides an ad-hoc analysis playground and agile development space that promotes code review and collaboration.

NetJets - Columbus, OH (Remote)

July 2018 to March 2021

Senior Cloud Engineer (AWS)

Architected, implemented, maintained and continuously developed integral business Cloud technologies by applying architectural standards and best practices, thorough testing, and rigorous cost analysis to provide industry-leading value and performance.

- Provided multiple time and space complexity reductions to production code and systems, saving millions of dollars and thousands of man-hours via the integration and application of cutting-edge Cloud, Analysis (Monte Carlo) and Machine Learning systems.
- Developed numerous state machine automation systems for security hardening, cost analysis, permission scoping, real-time performance tuning, and code and container build processes.
- Responsible for all Cloud Cost Optimization, including establishing standards and best practices in the entire AWS Cloud stack for code design, code efficiency, system architecture, and production automation to maximize spend and performance.
- Trained and guided numerous individuals from diverse backgrounds on understanding and fully implementing different code styles and practices to achieve positive results which can be felt throughout the company.
- Established and maintained the entire company-wide Cloud knowledge-base, standards and best practices, and provide architecture and code used as the gold standard for numerous teams and individuals across departments.

Technical Snapshot

Amazon Web Services

Over a decade of experience architecting and implementing systems that use a majority of AWS services to build as cost efficient and performant solutions as possible across a broad spectrum of problem spaces.

Technical Skills

Agile, Agile Methodologies, Amazon CloudFront, Amazon CloudWatch, Amazon DynamoDB, Amazon EBS, Amazon EC2, Amazon Redshift, Amazon S3, Amazon SQS, Amazon VPC, Ansible, AWS, Azure, Bash, Build Automation, C#, CDK, Cloud Architecture, CodeBuild, CodePipeline, Computer Security, Cost Optimization, Data Engineering, Data Mining, Datadog, DevSecOps, Docker, Docker Products, FinOps, GCP, Git, GitHub Actions, Go, Golang, Hardware Repair, Hexagonal Architecture, Infrastructure, Infrastructure as Code (Terraform, Pulumi, CDK, SAM, Ansible), Jenkins, Kubernetes, Linux, Machine Learning, Microsoft Azure, MLOps, Network Security, New Relic, Open Source Software, Optimization, OSX, Packer, PERL, Podman, Ports & Adapters, Programming, Python, Shell Scripting, Solaris, SQL, SRE, System Administration, System Architecture, System Engineering, Troubleshooting Hardware, UNIX, Vagrant, Vault, VMware ESX

Certifications

AWS Machine Learning Specialty
AWS Certified Solutions Architect Associate
AWS DevOps Engineer Professional

Achievements

13 World Records for calculating Pi via Y-Cruncher, all using a hand-built Linux kernel on an AWS X1 instance.
Jahnel Group 2022 Hackathon Winner.