**Jacob Coleman**

**Principal Software Engineer**

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**Mozilla | San Fransisco, CA (Remote)****Staff Data Site Reliability Engineer** 12/23 – 6/24

* Architected, implemented, and deployed solutions and tools for data, security, and cost optimization standards within Google Cloud using GKE, GCS, and BigQuery, leveraging Golang.
* Upgraded internal login authentication system to Duo Authentication across Mozilla operations.
* Implemented and deployed open-source projects in GKE for Mozilla's machine learning and data science teams, focusing on data privacy mapping and MLOps.
* Developed and deployed tools for monitoring project and resource usage, offering cost optimization insights for Google Cloud projects.
* Created tools for efficiently managing hundreds of millions of files, reducing 1.3 petabytes of data from archive.mozilla.org, saving five figures monthly.
* Provided strategic guidance for Generative AI initiatives across multiple teams.
* Shared prompt engineering guidelines for integrating Generative AI products and processes (ChatGPT, Claude.ai).

**Jahnel Group | Schenectady, NY (Remote)****Principal Software Engineer**  03/23 – 10/23

* Architected, implemented, and deployed numerous event-driven microservice-based systems across a broad range of client industries and 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 in programming, optimization, career growth, and decision-making as 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 diverse problem spaces among many others.
* Implemented Development, DevSecOps, SRE, and security best practices to overhaul infrastructure at scale, ranging from startups to Microsoft infrastructure, while handling over 500,000 requests per second with zero downtime, surpassing security benchmarks and achieving 100% success rate on all projects, including the most challenging stretch goals.
* Provided Cost Optimization techniques and tools, including internal solutions ranging from LLM-based solution generators to complete iterative processes leveraging tools such as Lambda Powertuning.
* 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 performant client MVP related to EDI X12 Healthcare data and analysis in Python and C#.
* Reviewed and realigned a C# codebase for the reliability and stability of custom serial hardware used in the construction and materials industry.

**Jahnel Group | Schenectady, NY (Remote)**

**Senior Site Reliability Engineer**  01/22 – 03/23

* 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, channels, groupcache, and semaphores.
* Performed assessments and guided cloud, data, and software engineering best practices.
* 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.
* 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.
* Upgraded healthcare revenue lifecycle management platform to follow DevOps and SRE best practices; this included the implementation of automated machine learning endpoint deployment, which enhanced the experience for both developers and users.
* Migrated multiple infrastructure deployments to GitHub Actions, Azure Pipelines, CodeBuild, CodePipeline, Jenkins, and AWS SAM.

**NetJets – Columbus, OH (Remote)
Senior Model Engineer** 04/21 – 12/21

* 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.
* Parallelized simulation processes, collapsing serial model execution times by an average of 150x and providing actionable output within minutes relative to days.
* Implemented microservice architecture, leveraging containerization and orchestration for rapid, reliable updates.
* Created automated data pipelines, leveraging ETL processes and IaC to ingest and aggregate data from disparate sources into the data lake.
* Implemented observability, monitoring, and anomaly detection practices to enable stability and uptime of critical systems.

**NetJets – Columbus, OH (Remote)**

**Senior Cloud Engineer**  07/18 – 04/21

* Provided multiple time and space complexity reductions to production code and systems, saving millions of dollars and thousands of person-hourss 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 provided architecture and code as the gold standard for numerous teams and individuals across departments.

**AWS Machine Learning Specialty**2022 - Present

**AWS DevOps Engineering Professional**2019 - 2022

**AWS Solutions Architect Associate**2018 - 2021

**Skills:** Agile, Ansible, API Gateway, AppFlow, Athena, Aurora, AWS, Azure, Bash, Batch, Build Automation, CDK, C#, Cloud Architecture, Cloud9, CloudFormation, CloudTrail, CodeBuild, CodeDeploy, CodePipeline, Cognito, Computer Security, Config, Control Tower, Cost and Usage Report, Cost Explorer, Cost Optimization, Data Engineering, Data Mining, Data Pipeline, Database Migration Service, Datadog, DevSecOps, Direct Connect, Docker, Docker Products, DynamoDB, EBS, EC2, ECR, ECS, EFS, Elastic Inference, EKS, Elastic Load Balancing, EMR, ElastiCache, EventBridge, Fargate, FinOps, GCP, Git, GitHub Actions, Glue, Go, Golang, Hardware Repair, HealthLake, Hexagonal Architecture, IAM, Infrastructure, Infrastructure as Code (Terraform, Pulumi, CDK, SAM, Ansible), IoT, Jenkins, KMS, Kinesis, Kubernetes, Lake Formation, Lambda, Linux, Machine Learning, MLOps, MSK, MQ, Network Security, New Relic, Open Source Software, OpenSearch Service, Optimization, Organizations, Outposts, OSX, Packer, PERL, Personalize, Polly, Podman, Ports & Adapters, Programming, Python, QuickSight, RDS, Rekognition, Resource Groups, Route 53, S3, SageMaker, SAM, Secret Management, Secrets Manager, SES, Shell Scripting, SNS, SQS, Snowball, Solaris, SQL, SRE, Step Functions, Storage Gateway, Systems Manager, Textract, Timestream, Transit Gateway, Transcribe, Troubleshooting Hardware, Trusted Advisor, UNIX, Vagrant, Vault, VMware ESX, WAF, Well-Architected Tool, WorkSpaces, X-Ray