ALEX **FRIEDRICHSEN**

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Experienced cloud architect and technical leader with a proven track record of leading successful implementations of cloud technologies in both startup and large enterprise environments. Demonstrated ability to lead cost-saving initiatives, mentor engineers, and drive organizational adoption of new frameworks and best practices.

EXPERIENCE

2024 – PRESENT

PRINCIPAL SOFTWARE ENGINEER, TOTAL EXPERT, INC.

- Architected event-sourced frameworks for core state management, establishing foundational requirements supporting multiple languages (PHP and .NET Core).
- Defined and enforced architectural standards and best practices, ensuring interoperability and long-term maintainability across service teams.
- Led cross-organizational architecture reviews, aligning engineering, product, and business stakeholders on the design and evolution of the financial decisioning platform.
- Advised engineering teams on cloud-native strategies, leveraging the AWS Well-Architected Framework and modern observability practices to improve scalability, resilience, and cost efficiency.
- Established standards for architecture decision capture and documentation, including consistent diagramming practices.
- Served as subject matter expert (SME) for Site Reliability Engineering (SRE) and Cloud Architecture, guiding initiatives in infrastructure, reliability, and performance optimization.
- Co-authored and implemented official AI ethics and usage policies, establishing guardrails for responsible adoption of AI across the company.
- Collaborated on the design of a sales AI agent, reducing customer churn and lowering manual workload for loan officers, driving measurable business impact.

2023 – 2024

CLOUD SOLUTIONS ARCHITECT, NFERENCE, INC.

- Architected for a federated AI/ML research platform spanning AWS, Azure, and GCP, enabling secure collaboration across hospital networks and research organizations
- Established and maintained cross-cloud architectural standards and best practices, ensuring consistency and interoperability across diverse partner environments
- Advised internal development teams on cloud-native architectures, emphasizing the AWS Well-Architected Framework and similar best practices for Azure and GCP
- Orchestrated regular cross-organizational architecture reviews, aligning multiple stakeholders on federated AI infrastructure and data governance

2022 – 2023

CLOUD ARCHITECT, CALABRIO, INC.

- Designed and executed a seamless path for migrating existing Java applications from Windows to Linux, enabling improved performance and cost optimization.
- Championed organization-wide adoption of Spring Boot framework, driving modernization and enabling streamlined development. Provided engineering guidance to empower other developers.

- Developed comprehensive architectural plan and estimate for successfully migrating from Microsoft SQL Server to Amazon Aurora, delivering improved scalability and cost efficiency.
- Led a highly impactful organization-wide initiative that resulted in monthly cloud spend reduction of 25-35%, achieving substantial cost savings.
- Recognized subject matter expert on cloud engineering and AWS Best Practices, leveraging expertise to optimize systems and drive efficiency.
- Collaborated closely with stakeholders in management, product management, and engineering to align architectural strategy with business needs.

2021 – 2022

PRINCIPAL SOFTWARE ENGINEER, CALABRIO, INC.

- Implemented enhanced observability using the OpenTracing standard and Datadog monitoring tools, empowering proactive issue identification and resolution.
- Led a successful cloud cost savings initiative by refactoring application code to be tolerant of ephemeral infrastructure (e.g., EC2 Spot Instances, ECS app autoscaling), resulting increased revenue savings per month.
- Demonstrated leadership in driving the adoption of Infrastructure as Code (IaC) practices, including the design of foundational modules and the transformation of DevOps patterns into a streamlined and modular deployment process.

2019 – 2021

SENIOR SOFTWARE ENGINEER, CALABRIO, INC.

- Pioneered the adoption of Kubernetes/AWS EKS as the containerization platform, revolutionizing scalability and deployment efficiency.
- Implemented standardized patterns for infrastructure as code using Terraform, Serverless Framework, and AWS CDK, ensuring consistent and streamlined deployment practices.
- Enhanced the throughput of the machine learning platform by refactoring Python libraries for superior asynchronous processing, boosting overall system efficiency.
- Provided expert guidance and knowledge as a foundational officer, shaping the development and growth of cross-team guilds dedicated to AWS, DevOps, and Java best practices.

2018 – 2019

LEAD SOFTWARE ENGINEER, COGREPS, INC.

- Designed and maintained the architecture for a cutting-edge mobile game and its analytics infrastructure, driving a modern and immersive user experience.
- Created and maintained new application microservices written in Java, TypeScript, and Go, leveraging modern technologies for increased performance and scalability.
- Served as a mentor to entry-level engineers, fostering their growth and ensuring high-quality code through comprehensive code reviews and pull request evaluations.

2013 – 2018

INFORMATION SECURITY ENGINEER, OFFICER, U.S. BANCORP, INC.

- Developed and maintained custom .NET libraries for seamless integration of legacy applications into Office365 and Azure, ensuring modernization and security.
- Successfully migrated legacy codebases from Java 8 to Java 11, aligning systems with current technology standards.
- Played a key role in the migration of legacy Java code to the Spring Boot framework, enhancing system efficiency and maintainability.

EDUCATION

MAY 2013
B.A. ECONOMICS, UNIVERSITY OF ST. THOMAS

MAY 2013
B.A. POLITICAL SCIENCE, UNIVERSITY OF ST. THOMAS

SKILLS

- 15 years' programming experience: Java, Python, TypeScript, Golang
- 10 years' Cloud Engineering experience (AWS, Azure)
- 8 years' experience in technical leadership
- Experience engineering in both startup and large enterprises
- Engineering and architectural experience in high security environments (HIPAA, HITRUST, FedRAMP)

ACTIVITIES

- Certification: CKAD
- Certification: AWS Certified Solutions Architect – Associate

REFERENCES

Available upon request