ZAC FERMANIS

SOLUTIONS ARCHITECT

EDUCATION

2017 Boston University

Boston, MA

MS in Computer Science with Concentration in Security

2007 University of Southern Maine

Portland, ME

BS in Computer Science

PROFESSIONAL EXPERIENCE

2017-Present Liberty Mutual

Remote

Corporate Functions - Talent and Enterprise Services - Solutions Engineer

- Named Corporate Functions AI champion. Responsible for advising senior leadership and Enterprise Architecture in Corporate AI guidance. Established several best practices, and created several key enablers in the Agentic Coding space. Created several MCP servers to accelerate application development. Established several security related best practices to safeguard Agentic Coding initiatives.
- Was responsible for providing architectural support for Talent and Enterprise Services, a corporate department of 150+ engineers. Was the aligned SE for all Talent related systems, including an award-winning portal, "Concierge", which centralizes several managerial tasks like Feedback management, Performance Evaluations, and Merit/Pay Administration.
- Authored several high-profile Architectural Strategies, including Fine-Grained Authorization using OPA, Micro-FrontEnd Architectures, and SuperGraphQL. Produced several North Star Architecture diagrams and Reference Architectures for the entire department. LeanIX certified practitioner.
- Mentored junior developers and provided guidance to support High Performance Engineering culture. Helped design and build a DEI portal to address internal employee accessibility needs and reduce IT Support call center volume.
- Lead the architecture, design and implementation details of company-wide overhaul of Performance Ecosystem utilizing a Micro-FrontEnd and Microservices with a SuperGraphQL architecture. Coordinated Cross-Functional "Game-Day" exercises to upskill performance engineering and site reliability practices. Supported the distribution of 37,000+ Bonus statements in a single day, with an error rate < 0.5% the largest amount in company history.
- Participated in several corporate-wide Hackathons (3000+ developers), advancing to the finals in 2022.

2016-Present Elegant Elephant Travel Chief Technology Officer - Co-Founder

Remote

- Responsible for all technical operations and decisions for regional travel company, Elegant
 Elephant Travel, resulting in over \$1M in annual sales, while maintaining a total operating cost
 of less than \$5k per year.
- Designed and created eCommerce website with integration with social media and high SEO scores. https://elegantelephanttravel.com. Includes various automated workflows to integrate with TravelJoy.com API and other Travel Portals and CRMs.

 Designed and implemented several automated AI-based workflows, including: Automated Daily Email Summary, Follow-Up detection, "Ask my Inbox" tool, and an Itinerary Validator to ensure typographical, logistical and geographical correctness of 3rd party-supplied itineraries.

2012-2017 Liberty Mutual

Dover, NH

Enterprise Technology Services – Security Delivery – Principal Software Developer

- Was Lead Developer for IAM Systems, responsible for a portfolio of 5 Enterprise-wide systems and 35 supporting applications. Responsible for Architecture, Design, System Administration, Release Engineering and Software Development for J2EE n-tier applications that serve large populations (5+ million customer accounts, 50k employee accounts)
- Implemented several tools and scripts in order to reduce release cycle overhead by over 60%, primarily by scripting several manual processes.
- Refactored several applications to support hot-swappable configuration changes without code changes or application outages.
- Mentored several junior developers and provided architectural support for multiple development squads

2010-2012 Liberty Mutual

Dover, NH

Products & Distribution Applications Development – Software Developer

- Worked as a Front-End Developer in LMIT department. Contributed to successful release of an upgrade/refactored Auto Insurance sales enterprise application (GEARS) as jQuery subject matter expert.
- Was the primary developer and designer for high-profile Personal Liability Protection (PLP) sales application. Both projects utilized IBM RAD/RTC.

2005-2010 Citigroup

Boston, MA

Applications Development – Senior Programmer Analyst

- Worked as a lead developer in several integration projects known as Model Office (AIS Portal) to integrate newly acquired Bisys group into Citi infrastructure; upgrading and re-engineering several .NET/ASP projects to comply with Citi's Information Security Standards and business practices. Managing project implementation.
- Was the Lead Developer in several XSP (Swift/FPML) processing projects for CDIL.
 Successfully implemented the Swift API using JAVA/J2EE code. Was the Subject Matter Expert for CDIL and taught several other developers in a knowledge sharing effort.
- Lead Developer for all of BGI's (Barclays) various trade processing/reporting applications.
 Implemented several JAVA/J2EE processes and .NET applications using Swift, MQ, and SQL integration.

2000-2002 Compaq Computer Co. / Hewlett Packard Shrewsbury, MA Storage Works - SANSOFT - Quality Assurance Engineer

• Worked as a Quality Assurance Engineer for Storage Area Network solution - StorageWorks, a high-available network storage solution. Was responsible for designing, writing, executing, and summarizing network testing scripts and their results. Scripts were written for various hardware/OS combinations, including IBM "Shark" and DS4400s, Oracle Solaris, Redhat Linux, and Windows Servers, all connected with Fiber Channel.

PROFICIENT LANGUAGES/PRODUCTS/FRAMEWORKS/CONCEPTS

Front End:

React, Next, Vue, Vite

Angular

HTML5/XML/JSP/ASP

CSS/SASS

Javascript/Typescript

jQuery

Groovy/Grails

Htmx

Utilities:

NPM/YARN/PNMP

CVS/SVN/GIT/Github Actions

K6 Load Testing

Bamboo/Bamboo Specs

Maven/Gradle

Ab Initio, Informatica (ETL)

Back End:

Node

Java/J2EE

.NET (C#, VB, J#)

SQL

Go

Rust

Spring Python

Serverless AWS CDK Concepts:

Agentic Coding w/ MCP servers & Memory Banks

Well-Architected Framework High Performance Engineering Networking/Network Security

Neural Networks / Artificial Intelligence

Machine Learning

Genetic Algorithms

Big Data - Hadoop/Hive

AWS/Azure/Google Cloud

OIDC/OAuth2 Flows

Cloud: AWS, Kubernetes, OCF, Vercel, Google