Sanaz Arabzadeh Esfarjani

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SUMMARY

Senior Software Engineer and Tech Lead with extensive experience in architecting and implementing high-performance, scalable systems serving millions of users. Expertise in cloud-native technologies, performance optimization, and cross-functional collaboration. Proven track record of delivering complex projects successfully and on-time.

SKILLS

Languages: Golang, TypeScript, Python, JavaScript (Node.js), Java
Technologies: AWS (Lambda, API Gateway, DynamoDB, CDK), Docker, Kubernetes, Jenkins, React, GraphQL
Concepts: Distributed Systems Architecture, Performance Optimization, DevOps, CI/CD
Observability: Cloudwatch, Datadog, Splunk
Certifications: AWS Certified Solutions Architect - Associate

EXPERIENCE

Salesforce   November 2021 – Present
Senior Member of Technical Staff (SMTS)   *Remote*
- Led the design and implementation of an in-memory queue system for Insights, significantly improving request processing efficiency and prioritization during peak periods
- Spearheaded the development of a high-performance API (GetFieldValuesWithOptionalFilter) for Tableau Pulse Insights, enhancing filter interactions and user experience
- Architected and implemented the integration of Scenario Planner into Tableau Online, managing containerization, CI/CD pipeline creation, and Kubernetes deployment
- Led performance optimization initiatives for the Pulse query stack, resulting in a 60-70% improvement in cache hit rates and substantial latency reduction
- Conducted comprehensive performance testing and analysis, identifying and resolving critical bottlenecks in the Insights service
- Led cross-functional investigations and collaborations with VDS, Hyper, and Core Metric teams to resolve complex system-wide issues

Liberty Mutual Insurance   December 2019 – November 2021
Senior Software Engineer   *Boston, MA*
- Tech lead for a cloud-native application serving millions of users, architecting a serverless solution using AWS Lambda, API Gateway, and DynamoDB
- Designed and implemented a robust CI/CD pipeline, enabling automatic deployments across multiple AWS environments
- Developed a comprehensive observability framework utilizing CloudWatch, Splunk and Datadog, enhancing system reliability and performance monitoring
- Led the development of two critical microservices for car leases and vehicle removal workflows, implemented using TypeScript/Node.js, Docker, and nginx

The MathWorks, Inc.   November 2013 – November 2019
Senior Software Engineer   *Natick, MA*
- Developed advanced thermal fluid libraries for Simscape physical modeling software, adopted by leading engineering companies globally
- Presented cutting-edge features in battery thermal management system modeling for electric vehicles at the MathWorks Advisory Board
- Collaborated with industry partners to integrate new functionalities into Simscape Fluids libraries, enhancing product offerings

EDUCATION

University of Toronto   April 2013
Ph.D. in Mechanical Engineering   *Toronto, Ontario, Canada*
- Thesis: A Numerical Platform for the Synthesis of Carbon Nanotubes by RF Plasma Technology
- GPA: 4.0/4.0

Concordia University   December 2007
M.Sc. in Mechanical Engineering   *Montreal, Quebec, Canada*

Sharif University of Technology   July 2004
B.Sc. in Mechanical Engineering   *Tehran, Iran*

PROJECTS

SNP Webscraper | *Go*   github.com/SanazME/SNPWebScraper
Developed a Go-based tool to scrape Single Nucleotide Polymorphism (SNP) genetic data from SNPedia, enhancing bioinformatics research capabilities

msr CLI | *Python*   github.com/SanazME/msr-CLI-package
Created a Python CLI for comprehensive web page analysis and performance metrics collection

Serverless Photo Processing Application | *AWS CDK, Python*   github.com/SanazME/serverless-application
Architected a cloud-native distributed application for uploading & processing photos using AWS services including S3, API Gateway, Lambda, and DynamoDB