AMIR KARIMI

Fractional VP of Engineering

Last update: Jun 2023
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20 years of experience in end-to-end project delivery, team building, and consultancy services. My experience spans from working with small startups to Disney and Amazon.

TECHNICAL SKILLS

Principals	Languages	Frameworks	Tools
Functional Programming	Python	Spark/PySpark	Linux
Distributed Systems	Go	Django	Docker
ETL	TypeScript	FastAPI	AWS
Serverless	JavaScript	Flask	Kubernetes
TDD	Scala	Rails	Terraform
OOP	Java	Play	Postgres
SOLID	Ruby	Akka	MySQL
Agile	C/C++	VueJS	MongoDB
Kanban	HTML/CSS	React	Kafka

EMPLOYMENT

Fractional VP of Engineering — **Self Employed - Vancouver, Canada** — **Jun 2023**

I support start-ups in the following two situations:

- They're outsourcing development and they need a liaison between their team and the overseas developers
- They have an in-house team that needs additional resources or more efficiency in creating scalable code

Software Engineer — **Amazon - Vancouver, Canada** — **Nov 2022 - Jun 2023**

- My team utilizes AI/ML to overcome advertising attribution challenges while maintaining compliance with strict privacy regulations that prohibit user identity capture and storage.
- Demonstrating exceptional leadership skills by becoming a project lead within two months of joining Amazon.
- One of the main contributors to re-architecting and improving the data processing pipelines which are processing petabytes of data daily, reducing the number of jobs from around 15 to 1.

Principal Software Architecture — **Acceptto - Vancouver, Canada** — **May 2019 - Nov 2022**

- Promoted to lead the core engineering team consisting of 5 engineers developing the company's core product.
- Reduced customer onboarding time from days to hours by developing a horizontally scalable, full-duplex communication service for the customer directory agent.
- Led the redesign and implementation of the next generation of Acceptto's SSO microservice to make it horizontally scalable and highly available.
- Designed and implemented a policy orchestration engine module that allows customers to control Acceptto's authentication system behavior with or without writing code.
- Increased the availability and scalability of the company's core services by leading the migration to AWS and adding multi-region disaster recovery support, done using Terraform.
- Helped the sales team to close two deals that increased the company's annual income by almost 30%, by leading the technical sale and architecture design calls.
- Acceptto was acquired by SecureAuth in Nov 2021.

Site Reliability Engineer — **Disney Streaming Services - Manchester, UK** — **Apr 2018 - Mar 2019**

- One of the main contributors to establishing the SRE practices within Disney Streaming Services as the 4th member of the newly shaped SRE team in the company.
- Increased the availability of the services by implementing a transparent cross-region replication support for AWS Kinesis resources (Kinesis did not offer such a service at the time).
- Helped three different teams within a year to prepare for big launches that required handling thousands of requests per second by reviewing the architecture, building high throughput performance tests, chaos engineering, and building necessary tools and processes to improve reliability.

Software Engineer **Disney Streaming Services - Manchester, UK** **Apr 2017 - Mar 2018**

- Developed scalable microservices capable of handling tens of thousands of requests per second using Scala, Play, DynamoDB, AWS Lambda, Kinesis, SQS, S3, etc.
- Contributed directly to the design and implementation of a new subscription system for BAMTech Media, which was later used in Disney+.
- The original company name was Cake Solutions. It was acquired by BAMTech and then Disney in 2017.

Independent Software Engineer / Consultant **Self Employed - Tehran, Iran** **Jan 2006 - Mar 2017**

- Designed and developed more than 40 custom-built software projects, from high-performance desktop applications written in C++ to highly scalable web applications written in Scala. Technologies: C#, .NET, Scala, Play, Akka, Python, Ruby, Java, Javascript, HTML/CSS, and more. See some of my works done as a solo developer under Projects section.
- Worked directly with clients from corporate to individual entrepreneurs as a contractor or partner.
- Built and managed a network of developers by setting up a transparent system to share the project's financial value with the whole team based on the value each member adds. It was a successful alternative to the traditional employment structure of corporations to attract the best talents.

Software Developer **Behsad - Arak, Iran** **Feb 2003 - Dec 2005**

- Software developer in a team of 3, consisting of two academic researchers building a 2D cutting-stock problem-solving desktop GUI application for the first of its kind in Iran. Written in C++ and utilizing the Genetic Algorithm, it was solving general cutting-stock problems with less than 5% waste on average.
- Designed and implemented dozens of applications using C#, .NET, and MSSQL.
- Mentored and led a team of junior developers.

FEATURED PROJECTS

- **Book Coupon Distribution System** (2016) - Registration and payment system to handle the sales of book coupons for students used in official Iranian book fairs. This app handled the equivalent of $2M transactions within two weeks for Tehran International Book Fair. Probably the largest project built entirely using the Scala ecosystem in Iran at the time. (Scala, Play, MongoDB, JS/HTML/CSS)
- **Book Coupon Distribution System** (2016) - Built an online registration, allocation, and payment system that handled the sales of book coupons for students used in international Iranian book fairs. This app handled the equivalent of $2M transactions within two weeks of the Tehran International Book Fair. Probably the largest project built entirely using the Scala ecosystem in Iran for the first time. (Scala, MongoDB, Play, Akka, DevOps)
- **Fair Registration and Management System** (2014) - A custom-made book fair registration system automates book publishers' registration process, allowing visitors to search for books and publisher locations online. It handled more than 40 provincial book fairs in the country, including the Tehran International Book Fair, with Alexa's rank below 500 among Iranian websites during the fair times. Serving tens of thousands of users per day using a single CPU and 2.5GB of RAM thanks to using non-blocking IO and async programming. (Scala, DevOps, MongoDB, Play)
- **Building a Pluggable Authentication Module (PAM) to add MFA support to Linux services** (2014) - Implemented a Pluggable Authentication Module (PMA) that integrates with my client's multi-factor authentication service. It allows adding MFA to all Linux services supporting PAM, such as SSH or local user logins. (C/C++, Linux)
- **Marine Services Management** (2012) - Automation of marine services management that consists of a desktop application as well as a backend. The desktop app can work in offline mode and syncs with the backend whenever the internet connection is available. It also has a licensing system that allows my client to easily sell this software to several customers. (C#, WPF, ASP.NET)
- **Steam Boiler Simulation CAD Software** (2011) - A GUI desktop app that simulates a virtual power generator steam boiler. Allows designing boiler systems by drag-and-dropping the boiler elements, specifying the connections and parameters then the user can run a simulation and receive the results report visually as well as on each element. (C#, WPF, Fortran)
- **Custom-made Enterprise Report Builder** (2010) - This project has started based on IRISL's need for a highly customizable report-building system. The customer was not able to produce their reports using off-the-shelf reporting software. This software was a set of tools, templating system, and integration with Microsoft Office Suite providing the flexibility customer needed and minimizing manual operations. (C#)
- **Boot loader (Personal Project)** (2001) - A boot loader program written from scratch to run from a floppy disk, built using my home-grown text rendering library. It was an effort to develop a basic operating system. I learned about working with low-level IO, direct screen memory access handling, memory management, and re-implemented some functions of the C standard library since the original ones depended on MS-DOS. (C/C++, Assembly)

EDUCATION

BSc in Computer Science **Azad** **2005 - 2007**

- Created a full-featured messenger system from scratch, including a custom binary protocol written in C++.
- Gave a few talks about Computer Networks & Socket Programming.

AEng in Computer Software **Elmi-Karbordi** **2003 - 2005**

- Developed a boot loader in an effort to develop a basic operating system. Learned working with IO, direct screen memory access handling, memory management (used linked-list data structure), re-implementing some functions of the C standard library from scratch.
- Was selected as the top 3 students to participate in ACM Asian regional contest.
- The youngest student attending this university at age 17.