

# Vahid Hashemi

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## Summary

I am a seasoned software engineer with expertise in developing and optimizing high-performance systems, scalable software solutions, and robust RDBMS architectures. While I have significant experience with technologies such as Java, Spring Boot, Kafka, and MariaDB, my skill set is not confined to any single technology stack. I bring strong proficiency in Linux systems, system-level operations, performance optimization, and DevOps practices, enabling me to address complex challenges across both software development and infrastructure.

## Education

**Sep 2011 – Sep 2012 Sheffield University – MSc Eng Advanced Software Engineering**

**Aug 2006 – Dec 2009 Bangalore University – Bachelor of Computer Application**

## Professional Experience

RNS, [Iran](#), Nov 2023 – Current

I have been leading a team of seven members in enhancing and modernizing a workflow engine that has been operational for over seven years. My role involved updating and aligning the old code with current best practices and standards. We are using a diverse set of technologies, including Hazelcast, MongoDB, Galera, MariaDB, PostgreSQL, RabbitMQ, Java Spring Boot and GlusterFS (DFS), to improve and optimize the system for better performance and scalability.

- Working on a BPMS workflow based on an open-source engine (Activiti Ver6/7) developed in java.
- Identified critical points for cache placement and implemented caching using Caffeine and Hazelcast to improve application response time from 800ms to 50ms.
- Make the workflow to be responsible up to 100 million requests per day.
- Diagnosed and resolved memory leaks using Oracle Mission Control and heap analysis, improving system stability and reducing downtime.
- Resolved performance bottlenecks in the application and RDBMS by leveraging Linux monitoring tools, DBMS utilities, and Java profilers, achieving a 30% improvement in engine performance as validated through benchmarking.
- Optimized MariaDB internals, boosting database throughput from 1000 QPS to 5000 by implementing critical database indexes, partitioning, and clustering with Galera.
- Implemented OAuth2.0 and OIDC authentication solutions using Apereo CAS 5 and Keycloak.
- Revised and maintained the company's internal DevOps ecosystem, including Sonatype Nexus, GitLab, Jenkins, and SonarQube, optimizing development workflows, increasing operational efficiency, and cutting manual CI/CD build and delivery times from one hour to just 10 minutes.
- Developed and deployed a CI pipeline for a TypeScript-based frontend utilizing the PNPM package manager.
- Consolidated four HP G7 bare metal into one HP G9 and migrated all the VMs from ESX to Proxmox.

- Set up a remote work environment using a VPN and Apache Guacamole for secure and accessible remote access.
- Developed an automated provisioning system with Ansible to deploy and configure the application across multiple nodes.

## SP, Iran, Mar 2016 – Nov 2023

I've had various responsibilities which involved from software development mostly using Java and being devops to provision and deploy codes.

- Designed and implemented a **2FA** time-based **remote access gateway** using **Java** and **Spring Boot**, integrating **Spring Boot Security**, REST API, and OpenVPN. This solution oversaw the remote workflow and empowered engineers with a custom VPN, helping seamless remote work for **2 years** during the Covid-19 pandemic.
- Designed and launched a **Java**-based **aggregator** data pipeline module for image processing, enhancing the big data streaming framework with **Kafka** integration, leading to a 30% increase in data processing speed and supporting streams of over 500,000 images daily
- Developed a multi-threaded **crawler** leveraging **Java**, **Spring Boot**, **Python**, **Kafka**, and **Redis**, enabling the machine learning team to efficiently process over 100TB of raw data. Utilized **protobuf** for seamless data transfer between **microservice** components.
- CI/CD pipeline performance increased by 2X by implementing and optimizing caching and utilizing a local repository manager. **Optimizing Containers** to reduce their size and improve delivery time by 30%.
- Implemented a central management system for **Iptables** and **Fortinet firewalls** using python scripts to reduce manual operation and save 20-man hours per month.
- Led the transformation from a monolithic solution called **Zentyal**, transitioning from an all-in-one architecture to a distributed solution. This pivotal shift supported the company's growth, helping the seamless integration of 110 other engineers. Our enhanced infrastructure utilized **FreeIPA**, **Zimbra**, **IpTables**, **KeyCloak**, and **HAProxy**, complemented by proprietary tools developed in-house using Java and Python scripts.
- **Mentored** new graduates in Linux engineering and Java development.

## Freelance Software Developer, Iran, Sep 2103 – Mar 2016

- Developed a Java-based Android file sharing application for PersianGig, a cloud-based file sharing platform.
- Created a Java-based Android live IPRadio application for Iranseda.ir.
- Designed and implemented a DRM-secured video player using Windows .NET Forms/C# with server-side video encoding for content protection through scrambling.
- Built a distributed web crawler using Java and Kafka to efficiently crawl over 10 million pages.
- Developed a live currency reporting Telegram bot using Golang.
- Developed an admin panel using javascript.

## Behandish, Iran, July 2013 – Sep 2013

- During my work on an n-tier framework in C# and nHibernate, I was also responsible for developing a mobile app called Simorgh, and I was able to develop new features for an internal framework called SIB and refactor the whole framework.

### **MFT, [Iran](#), Jan 2013 – July 2013**

- During my brief stay, I taught Java concepts such as SOLID/OOP/OOAD to software engineers.

### **K-know, [UK](#), May 2012 – Jan 2013**

- Software developer working with JEE, springMVC, and RoR, as well as developer of Android apps. I have handled all aspects of mobile application development and security as well.

### **Ossila Ltd., [UK](#), Mar 2012 – May 2012**

- Developed a tailor-made PHP crawler using PHP 5 and cron jobs for gathering information according to Ossila's requirements and polishing their existing website.

### **epiGenesys, [UK](#), Sept 2011 – May 2012**

- I was an apprentice Ruby on Rails developer during my master's program. Together with my classmates, I delivered a fully functional web application to a real customer during the course.

### **Iranseda.com, [Iran](#), Mar 2010 – Sept 2011**

- Designed and developed several websites using .NET technology and SQL server.

### **Narien Resaneh Co., [Iran](#), Jan 2010 – Sept 2011**

- In addition to developing bespoke software using .NET technologies and PHP, I also provided consulting and maintenance services for existing brownfield software.

### **Ettelaat publications and newspaper , [Iran](#) , Apr 2003 – Apr 2006**

- In my role as a developer, I developed desktop applications using Visual Basic 6 and Web applications using classic ASP, while in my role as a network assistant, I maintained Windows servers.