Mahdi **Hoseini**

SENIOR FRONT END ENGINEER

Tehran, Iran

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Summary

Senior Front-End Engineer with **5+ years** of experience building high-performance web applications using **JavaScript/TypeScript (React.js, Next.js)**. Skilled in crafting clean, efficient code and collaborating with cross-functional teams to deliver user-focused solutions while staying current with industry trends.

Work Experience

Dunamu Inc.   *Seoul, S.Korea*
DEVOPS ENGINEER   *Sep. 2023 - Present*

Danggeun Pay Inc. (KarrotPay)   *Seoul, S.Korea*
FOUNDING MEMBER & SITE RELIABILITY ENGINEER & INFRASTRUCTURE TEAM LEAD   *Mar. 2021 - Jun. 2023*

- Everything that matters.
- Designed and provisioned the entire infrastructure on the AWS cloud to meet security compliance and acquire a business license for financial services in Korea.
- Continuously improved the infrastructure architecture since launching the service. (currently 3.6 million users)
- Established a standardized base for declarative management of infrastructures and service deployments, enabling operational efficiency and consistency. Over 90% of AWS resources were all managed through standardized terraform modules. All add-ons and service workloads on the Kubernetes cluster were managed on a GitOps basis with Kustomize and ArgoCD.
- Saved over 30% of the overall AWS costs by establishing a quarterly purchasing strategiy for RI (Reserved Instance) and SP (Savings Plan) and by introducing Graviton instances.
- Established a core architecture for regulating of outbound DNS traffic in multi-account and multi-VPC environments utilizing AWS Route53 DNS Firewall and FMS. This significantly increased the level of security confidence in the financial sector's segregated environment.
- Introduced Okta employee identity solution in the company, establishing security policies and configuring SSO integration with over 20 enterprise systems including AWS, GitHub, Slack, Google Workspace. Set up a Hub and Spoke architecture, enabling a collaborative account structure with the parent company, Daangn Market.

Danggeun Market Inc.   *Seoul, S.Korea*
SITE RELIABILITY ENGINEER   *Feb. 2021 - Mar. 2021*

Kasa   *Seoul, S.Korea*
FOUNDING MEMBER & DIRECTOR OF INFRASTRUCTURE DIVISION   *Jun. 2018 - Jan. 2021*

- Designed on-boarding process to guide new engineers, help them to focus on the right tasks, and set expectations to help them be successful at Infrastructure team.
- Migrated the orchestration system from DC/OS to Kubernetes which is based on AWS EKS. Managed 3 Kubernetes clusters and 300+ pods. Managed all Kubernetes manifests declaratively with Kustomize and ArgoCD.
- Designed and managed complex network configurations on AWS with 4 VPC and 100+ subnets. Separated the development network and operation network according to financial regulations. Established dedicated network connections from AWS VPC to partners' on-premise network based on AWS Direct Connect with secure connection using IPsec VPN. Provisioned OpenVPN servers with LDAP integration.
- Provisioned a observability system with Kafka, Elastic Stack(Filebeat, Heartbeat, APM Server, Logstash, Elasticsearch, Kibana). Collected log, uptime, tracing data from hosts, containers, pods and more. The ES cluster which has 9 nodes processed more than 1 billion documents per month. Wrote Terraform module to easily provision ES cluster on AWS EC2 instances.
- Provisioned a monitoring system with Kafka, Telegraf, InfluxDB, Grafana. Collected metrics from hosts, containers, pods and more. Wrote Terraform module to easily provision InfluxDB with HA on AWS EC2 instances.
- Introduced Kong API Gateway to easily connect all API microservices with a declarative management method based on Terraform and Atlantis to collaborate and audit change history.
- Provisioned the Directory Service for employee identity management based on OpenLDAP which guarantees HA with multi-master replication.
- Implemented Worker microservices consuming Kafka event topics for email, SMS, Kakaotalk and Slack notification. Developed in-house framework to easily build Kafka consumer microservice with common features including retry on failure, DLQ(Dead Letter Queue), event routing and more.
- Introduced Elastic APM to help distributed tracing, trouble-shooting and performance testing in MSA.

Omnious. Co., Ltd.
Seoul, S.Korea

SOFTWARE ARCHITECT
Jun. 2017 - May. 2018

- Provisioned an easily managable hybrid infrastructure(Amazon AWS + On-premise) utilizing IaC(Infrastructure as Code) tools like Ansible, Packer and Terraform.
- Built fully automated CI/CD pipelines on CircleCI for containerized applications using Docker, AWS ECR and Rancher.
- Designed an overall service architecture and pipelines of the Machine Learning based Fashion Tagging API SaaS product with the micro-services architecture.
- Implemented several API microservices in Node.js Koa and in the serverless AWS Lambda functions.
- Deployed a centralized logging environment(ELK, Filebeat, CloudWatch, S3) which gather log data from docker containers and AWS resources.
- Deployed a centralized monitoring environment(Grafana, InfluxDB, CollectD) which gather system metrics as well as docker run-time metrics.

PLAT Corp.
Seoul, S.Korea

CO-FOUNDER & SOFTWARE ENGINEER
Jan. 2016 - Jun. 2017

- Implemented RESTful API server for car rental booking application(CARPLAT in Google Play).
- Built and deployed overall service infrastructure utilizing Docker container, CircleCI, and several AWS stack(Including EC2, ECS, Route 53, S3, CloudFront, RDS, ElastiCache, IAM), focusing on high-availability, fault tolerance, and auto-scaling.
- Developed an easy-to-use Payment module which connects to major PG(Payment Gateway) companies in Korea.

R.O.K Cyber Command, MND
Seoul, S.Korea

SOFTWARE ENGINEER & SECURITY RESEARCHER (COMPULSORY MILITARY SERVICE)
Aug. 2014 - Apr. 2016

- Lead engineer on agent-less backtracking system that can discover client device's fingerprint(including public and private IP) independently of the Proxy, VPN and NAT.

ShitOne Corp.
Seoul, S.Korea

SOFTWARE ENGINEER
Dec. 2011 - Feb. 2012

- Developed a proxy drive smartphone application which connects proxy driver and customer.
- Implemented overall Android application logic and wrote API server for community service, along with lead engineer who designed bidding protocol on raw socket and implemented API server for bidding.

Honors & Awards

INTERNATIONAL AWARDS

2021	**2nd Place**, AWS ASEAN AI/ML GameDay	*Online*
2020	**Finalist**, DEFCON 28th CTF Hacking Competition World Final	*Las Vegas, U.S.A*
2018	**Finalist**, DEFCON 26th CTF Hacking Competition World Final	*Las Vegas, U.S.A*
2017	**Finalist**, DEFCON 25th CTF Hacking Competition World Final	*Las Vegas, U.S.A*
2014	**Finalist**, DEFCON 22nd CTF Hacking Competition World Final	*Las Vegas, U.S.A*
2013	**Finalist**, DEFCON 21st CTF Hacking Competition World Final	*Las Vegas, U.S.A*
2011	**Finalist**, DEFCON 19th CTF Hacking Competition World Final	*Las Vegas, U.S.A*

DOMESTIC AWARDS

2021	**2nd Place**, AWS Korea GameDay	*Seoul, S.Korea*
2015	**3rd Place**, WITHCON Hacking Competition Final	*Seoul, S.Korea*
2017	**Silver Prize**, KISA HDCON Hacking Competition Final	*Seoul, S.Korea*
2013	**Silver Prize**, KISA HDCON Hacking Competition Final	*Seoul, S.Korea*

COMMUNITY

2022 -	**AWS Community Builder (Container)**, Amazon Web Services (AWS)
2022 -	**HashiCorp Ambassador**, HashiCorp
2018 -	**Organizer of HashiCorp Korea User Group**, HashiCorp

Certificates

2023	**AWS Certified Advanced Networking - Specialty**, Amazon Web Services (AWS)
2022	**AWS Certified Security - Specialty**, Amazon Web Services (AWS)
2022	**AWS Certified Solutions Architect – Professional**, Amazon Web Services (AWS)
2021	**AWS Certified SysOps Administrator – Associate**, Amazon Web Services (AWS)
2020	**Certified Kubernetes Application Developer (CKAD)**, The Linux Foundation
2023	**HashiCorp Certified: Consul Associate (002)**, HashiCorp
2023	**HashiCorp Certified: Terraform Associate (003)**, HashiCorp

Education

POSTECH(Pohang University of Science and Technology)   *Pohang, S.Korea*

B.S. in Computer Science and Engineering   *Mar. 2010 - Aug. 2017*

- Got a Chun Shin-Il Scholarship which is given to promising students in CSE Dept.

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