



# Mohammad Hossein Heidari

## Senior Software Engineer

Experienced software engineer with a demonstrated history of working in the computer games and video streaming industries.

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## SKILLS

Go Kafka PostgreSQL Elasticsearch Redis gRPC PHP MySQL MongoDB Javascript  
Kubernetes Docker GCP AWS Agile SCRUM OKR

## EXPERIENCE

### Software Development Engineer

#### ELEVEN SPORTS HQ

11/2020 - Present

Amsterdam, Netherlands (Remote)

*ELEVEN is serving millions of customers with live and on demand content and enabling hundreds of partners to live stream their matches every month.*

- Developed and maintained 40+ services, jobs, and internal tools using Go and gRPC.
- Reduced complexity and technical costs via designing asynchronous serverless message passing architecture using kafka, websockets and durable objects on CloudFlare workers platform.
- Improved resiliency of the system against DDoS attacks by utilising envoy proxy rate limit service and integrating it with the backend services.
- Designed and Implemented viewer concurrency control system as a CloudFlare worker.
- Designed and implemented user subscriptions with recurring payments supporting multiple payment service providers.
- Migrated legacy search and explore service from NodeJS to Go.
- Implemented remote telemetry gateway service to support external analytics integrations.
- Designed and Implemented asset management service and standardised bucket naming by implementing a common library.
- Implemented match exploration APIs for a FIFA project.

### Full-stack Developer

#### L'île des Médias / ViaDirect

03/2019 - 11/2020

Paris, France (Remote)

*ViaDirect is an interactive solution that guides and informs visitors of public places.*

- Responsible for integration of their products with Google Calendar.
- Standardized APIs using RFC3339 to support different time zones across the globe.
- Optimized code on VDLights embedded boards.

### Co-Founder and Director of Technology

#### Quiz of Kings

04/2015 - 10/2018

Tehran, Iran

*Quiz of Kings is a social trivia mobile game. It has 18M+ registered users and 2.5M+ monthly active users.*

- Lead architect designing several grpc microservices via *Gin*, *Vitess*, *Redis* and *etcd*.
- Migrated legacy *PHP* code to *Go* and changed the architecture from monolithic to microservices.
- Designed and deployed a large scale sharded *MySQL* database (over 200 nodes) using *Vitess*.
- Designed and developed a cheat detection system which uses many factors to find potential cheaters and ban them.
- Built fully automated CI/CD pipelines via *Gitlab CI* for testing and deploying containerized applications to Kubernetes.
- Helped implement best practices such as version control (Git) and code standards.
- Implemented *Agile* methodology to achieve team success in a highly dynamic environment.

## Software Architect

### Snappfood

06/2014 - 04/2015

Tehran, Iran

Snappfood is the leading online food ordering company in Iran.

- Designed and Implemented *RESTful* API server for web and mobile application via *Symphony2*, *MySQL*, and *Redis*.
- Migrated all of data from Microsoft SQL Server into Galera Cluster for MySQL.
- Redesigned and migrated legacy code in ASP.Net to PHP.
- Implemented *geographic/geometric algorithms* to define restaurant delivery zones, delivery fees, etc.

## Mobile Application Developer

### Turned On Digital

10/2013 - 06/2014

Tehran, Iran

TOD is a full service mobile services agency based in the UK and the ME.

- Worked on a multi-platform Javascript mobile application made with Titanium SDK.

## EDUCATION

## BSc in Computer Engineering

### Amirkabir University of Technology

Aug. 2012 - Aug. 2016

Tehran, Iran

(Incomplete)

- Aug 2014, 1st Place in Humanoid Robots Technical Challenge (International Robocup Competitions 2014, Brazil)
- Nov 2013, 1st Place in Standard Platform League Robots (AUTCUP 2013, Iran)
- Nov 2012, 2nd Place in Standard Platform League Robots (AUTCUP 2012, Iran)

## PUBLICATIONS

### An Imitation Framework for Social Robots Based on Visual Input, Motion Sensation, and Instruction

#### Mechatronics and Robotics Engineering for Advanced and Intelligent Manufacturing

Springer - 2017

Falahi, Mohsen and Shamshirdar, Faraz and Heydari, Mohammad Hosein and Shangari, Taher Abbas

- This framework provides a fluent platform for a safe Human-Robot Interaction (HRI) thanks to imitation which can be used widely in social robotics.
- The proposed framework benefits from the ability of mutual communication between the robot and the demonstrator which facilitates the interaction and cause in removing all ambiguities in complex, new, or unknown tasks.

### AUT-UofM Humanoid TeenSize Joint Team; A New Step Toward 2050's Humanoid League Long Term RoadMap

#### Robot Intelligence Technology and Applications 3

Springer - 2015

Shangari, Taher Abbas and Shamshirdar, Faraz and Heydari, Mohammad Hosein and Sadeghnejad, Soroush and Baltes, Jacky and Bahrami, Mohsen

This paper describes a practical and tested way for developing a team of humanoid robots with full collaboration amongst the team members. This helps in reducing the costs of developing a team. The AUT-UofM team found out that developing a joint team is easier than trying to build one individually.