

In the Name of Allah, the Most Gracious, the Most Merciful



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PERSONAL DETAILS

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EDUCATION

PhD in Computer Engineering

2020-present

Sharif University of Technology

Direct Admission

Supervisor: Dr. Mohammad Izadi

MSc. in Computer Engineering, Software

2018-2020

Sharif University of Technology

Direct Admission, 19.15 GPA

Project: Big Data Application Performance Prediction and Cost-based Heterogeneous Resource Recommendation in Cloud

Supervisor: Prof. Ali Movaghar

BSc. in Computer Engineering, Software

2014-2018

Iran University of Science & Technology

First Rank, 18.76 GPA

Project: Mixed Performance and Power Consumption Modeling in Virtual Machine Using Coloured Petri Nets

Supervisor: Dr. Mohammad Abdollahi Azgomi

Diploma, Mathematics & Physics

2010-2014

Allameh Tabatabai School

WORK EXPERIENCE

Senior Software Developer & System Architect

2016-present

HooshRavan

HooshRavan was born in March 2016 and now its main focus is on "Smart Home Devices." On the market side, The products are known by *Hinava* brand. I joined HooshRavan in 2016 as an iOS developer. One and a half years later, I joined the backend team to rewrite the whole backend stack to achieve more uptime and stability. Two years later, I wrote the client web application.

Client/Server Developer**2014-2019***Elmogame Game Studio*

Elmogame studio is a game studio founded by Iran University of Science and Technology students in 2013. At the time I was with the team, we published two online android games "Farmuler" and "Footyard" that I was one of the Unity3D developers on these two projects. Besides we were working on another game named "Kalanshahr" that I wrote the backend of this game. This game was later published with the name "NewCity".

iOS Developer**2015-2016***Hamayeh R&D*

Hamayeh was established in 1995, originally aiming at Automation of Control Systems and in less than 5 years of hard work and experience managed to become the major manufacturer of a wide range of different lighting systems equipment. At that time, the R&D team was working towards making a good Smart Home solution and I was working there to write and maintain its iOS client.

TEACHER ASSISTANT**Theory of Distributed Systems****Fall 2021***Dr. Mohammad Izadi***Verification of Reactive Systems****Spring 2020***Prof. Ali Movaghar*

Textbook: Principles of model checking *written by C. Baier & JP. Katoen*

Principles of Computational Intelligence**Spring 2018***Dr. Naser Mozayeni***Advanced Programming****Spring 2016***Dr. Adel Torkaman Rahmani***Fundamental of Computer Programming****Fall 2015***Dr. Adel Torkaman Rahmani***SELECTED COURSES**

<i>Advanced Programming</i>	20 / 20
<i>Discrete Mathematics</i>	20 / 20
<i>Data Structures</i>	20 / 20
<i>The Theory of Formal Languages and Automata</i>	20 / 20
<i>System Analysis and Design</i>	20 / 20
<i>Software Engineering</i>	19 / 20
<i>Operating Systems</i>	19.6 / 20
<i>Artificial Intelligence and Expert Systems</i>	20 / 20
<i>Computer Networks</i>	17.7 / 20
<i>Software Testing</i>	20 / 20
<i>Formal Methods in Software Engineering</i>	20 / 20
<i>Object-Oriented Analysis and Design</i>	19.6 / 20
<i>Formal Specification and Verification of Programs</i>	19.0 / 20
<i>Computer System Performance Evaluation</i>	19.3 / 20
<i>Theory of Distributed Systems</i>	19.7 / 20

<i>Algorithmic Game Theory</i>	19.5 / 20
<i>Semantic Web</i>	20 / 20
<i>Data Mining</i>	20 / 20

PUBLICATION

Cost-aware Resource Recommendation for DAG-based Big Data Workflows: Apache Spark Case Study

Finalizing

Mohammad-Mohsen Aseman-Manzar, Soroush Karimian-Aliabadi, Reza Entezari-Maleki, Bernhard Egger and Ali Movaghar

Fixed-point Iterations Approach to Spark Scalable Performance Modeling and Evaluation

Accepted; To Appear

Soroush Karimian-Aliabadi, Mohammad-Mohsen Aseman-Manzar, Reza Entezari-Maleki, Danilo Ardagna, Bernhard Egger and Ali Movaghar
Journal of IEEE Transactions on Cloud Computing
<https://ieeexplore.ieee.org/abstract/document/9573291>

Designing a platform for analysing games' users' data and classification of essential metrics (in persian)

2017 Nov.

Mohammad-Mohsen Aseman-Manzar, Sarah Aseman-Manzar and Behrooz Minaei
1st Digital Games Research Conference (DGRC), <https://civilica.com/doc/696919>

PROJECT

Hinava Smart Home

2016-present

Senior iOS/Backend/WebApp Developer & System Architect

Hinava is a smart home system developed in Hooshnavan company in Iran. It is one of the first and best manufacturers of smart home systems in the country. The system in Hinava smart home includes three parts; Hardware devices, Hinava cloud service, and mobile applications. The devices include a central panel which acts as a gateway to our system. other devices like sensors and actuators are connected to the central panel and through it, they connect to user's app on smartphones or tablets.

(iOS: Swift) (WebApp: React) (Backend: Docker Docker Swarm CockroachDB Redis Openresty HAProxy Golang Python Kibana Elasticsearch Grafana Prometheus Kafka and so on)

MSc. Project

2018-2020

Supervisor: Prof. Ali Movaghar

Project Title: Big Data Application Performance Prediction and Cost-based Heterogeneous Resource Recommendation in Cloud

Spark Hadoop 2.x, 3.x Yarn Linear Programming Performance Prediction TPC-DS Benchmark Gurobi

BSc. Project

2017-2018

Supervisor: Dr. Mohammad Abdollahi Azgomi

Project Title: Mixed Performance and Power Consumption Modeling in Virtual Machine Using Coloured Petri Nets

CPN-Tools ML Language Performance Modeling Power Consumption Modeling

Gametic - A Game Analytics Tool

2016-2017

Product Manager, Backend Developer

Gametic is an analytics tool that is specialized for games. Gametic supports many analytics reports in a user-friendly web-based dashboard in two categories of user reports and financial reports. user reports such as daily active users, users retentions, and sticky factor. financial reports such as ARPU, LTV, and Paid Rate.

[Docker](#) [MongoDB Sharded Cluster](#) [MongoDB Aggregation Pipeline](#) [Redis](#) [Nginx](#)
[Golang](#) [Gin Framework](#) [Python](#) [Vegeta \(load testing tool\)](#)

Kalanshahr (NewCity) Game

2016-2020

Backend Developer

Kalanshahr is an online strategy game that each player manages their city by choosing appropriate defensive strategies to avoid robbery. Each player builds their city and players are usually able to walk around the other players' cities to become aware of their status. Players are also able to watch the inner view of the building in the cities and interact with them.

[Docker](#) [PostgreSQL](#) [Redis](#) [Python](#) [Nginx](#)

Footyard Game

2015-2017

Unity3D Developer (Physics, Gameplay, AI, etc.)

Footyard is an online football management game with online gameplay. This game is like the famous "Soccer Stars" game but with more features. Each player has their team and they are responsible for the team management. It is also possible to find friends and hang out with them.

[Unity3D](#) [C#](#) [RabbitMQ](#)

Farmuler Game

2015-2016

Unity3D Developer (Online Gameplay)

Farmuler is an online multiplayer farm game for Android devices. Farmuler has two parts including online multiplayer and offline single player. In the offline part, 120 levels are designed and divided into 4 seasons of a year. Players can achieve the goal of each level at the proper time and they have to demonstrate their skill of time management and resource management to approach the aims. Players will be rewarded as they get to the goals sooner.

[Unity3D](#) [C#](#) [Websocket](#)

SKILL

<i>Languages</i>	PERSIAN (MOTHER TONGUE) ENGLISH (LIMITED WORKING PROFICIENCY, MSRT 70%)
<i>Programming Languages</i>	PYTHON, GO, SWIFT, C#, JAVASCRIPT, JAVA, SQL, C/C++
<i>Data Stores</i>	REDIS, POSTGRESQL, MONGODB, COCKROACHDB
<i>Industry Knowledges</i>	BACKEND, iOS, FRONTEND, GAME DEV., DATABASE DESIGN, ORCHESTRATION, ARCHITECTURE DESIGN, SOFTWARE TESTING
<i>Frameworks & Libraries</i>	FLASK, GIN, REACT, NUMPY, PYTORCH
<i>Other Softwares</i>	DOCKER, GIT, UNITY3D, CPN-TOOLS, L ^A T _E X