

# Hamed Kalantari

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## Personal Details

**Gender:** Male

**Birth Place:** Iran

**Birth Date:** 25 February 1997

## Education

### Sharif University of Technology

Tehran, Iran

MASTER OF SCIENCE IN COMPUTER SCIENCE, GPA: 19.44/20 (4.0/4.0 U.S. SCALE)

Oct. 2020 - May 2023

- **MSc. Thesis:** Virtual Network Function Placement using Machine Learning
- **Supervisor:** Prof. Ali Movaghar

### Iran University of Science and Technology

Tehran, Iran

BACHELOR OF SCIENCE IN COMPUTER SCIENCE, GPA: 16.54/20 (3.46/4.0 U.S. SCALE)

Sep. 2015 - Jun. 2020

- **BSc. Thesis:** Designing and Prototyping a Blockchain Infrastructure For Smart Electric Grid
- **Supervisor:** Dr. Nasser Mozayani

## Honors and Awards

### Gold medal (rank 1) of 25th National Computer Olympiad

### Awarded scholarship of Iran's National Elites Foundation

### Awarded as talented and ranked student of the Computer Department in the year 2016-2017

## Work Experience

### Freelancer

Ankara, Turkey

BLOCKCHAIN DEVELOPER

ongoing

- Implementing a soccer blockchain-based game on Solana network. Users can create teams, buy NFT-players to use in their team, train and arrange them, manage the team, compete in different leagues, and claim their rewards. All these events take place in terms of transactions and using a specific SPL-Token. There is also a staking system for token holders, which can freeze their assets to gain money from user purchases and contract's revenue.
- Used technologies: Rust, Solana, Anchor, Web3, Node.js, Express.js, PostgreSQL, Mocha, Chai, GIT, Docker, Nginx.

### Bitalin Exchange

Tehran, Iran

BLOCKCHAIN DEVELOPER

Dec 2020 - Jan 2022

- Implementing the exchange wallet for most of popular blockchain networks.
- Designing a secure AirGap wallet to fully separate signing authority from online server which is in charge of maintaining balance changes, transferring assets to cold wallet and hot wallets, and creating network and contract specific transactions.
- Securing the online hot wallets by forcing them not to maintain assets over some low threshold. Also transferring assets periodically to intermediate wallets which gives more security in case of server exploitation.
- Implementing some backup systems for having a reliable system such as automatically switching to other blockchain network nodes in case of DDoS attacks or other denial of service situations.
- Developing full functionality wallets for many blockchain networks including: Bitcoin, Ethereum, Tron, Polkadot, Cardano, EOS, Stellar, Ripple, Harmony, Litecoin, Dash, Bitcoin Cash, Dogecoin, Binance Smart Chain, ERC20/TRC20, and TRC10.
- Used technologies: Node.js, Solidity, Web3, Express.js, PostgreSQL, Redis, Database Design, Mocha, Chai, GIT, Docker, Nginx.

## Torfehnegar Holding

Tehran, Iran

SOFTWARE ENGINEER

May. 2019 - Feb. 2020

- Software engineering at Omega Restaurant Solutions company, a subsidiary of Torfehnegar Holding.
- Implementing a closed network solution to restaurant ordering system, which enable customers to join the internal network to make their orders.
- Programming MicroTik Layer-3 network router to maintain our customized DNS server for having better user experience when surfing the restaurant menu, and enable sending notification to customers using Hotspot when they are in range.
- Programming Raspberry Pi to run our web hosting server in an encrypted environment in favor of securing the program license against attackers.
- Implementing RESTful APIs in Django as back-end of the ordering web application and maintaining accounting system of the restaurant, also used React.js for front-end of web application.
- Used technologies: Python, Django, React.js, MongoDB, GIT, Docker, Network Programming, Raspberry Pi, Nginx.

## Iran University of Science and Technology

Tehran, Iran

IT MANAGER

Jan. 2019 - Jun. 2019

- IT Manager of 6th ICRARE international conference held in Tehran, Iran.
- Used technologies: PHP.

## Elmogame Game Studio

Tehran, Iran

CLIENT SERVER DEVELOPER

Apr. 2017 - Dec. 2018

- Client server developer of Footyard Game at Elmogame game studio located at Game Development Center Laboratory in Iran University of Science and Technology under supervision of Dr. Minaee. This game is similar to Soccer Stars game.
- Responsible for implementing RESTful APIs in Flask and using MongoDB database management system for the game. Used Unity game engine for front-end in the game.
- Design a real-time peer-to-peer messaging system using RabbitMQ message broker in order to maintain snapshots from players actions and have a consistent look between two sides in a timely manner.
- Used technologies: Python, Flask, RestAPI, MongoDB, Unity Game Engine, C#, Nginx, GIT, Docker.

## Teaching Assistant

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### Theory of Distributed Systems

Tehran, Iran

SHARIF UNIVERSITY OF TECHNOLOGY

Sep. 2021 - PRESENT

- **Presented by:** Dr. Mohammad Izadi

### Automata Theory and Languages

Tehran, Iran

SHARIF UNIVERSITY OF TECHNOLOGY

Sep. 2021 - PRESENT

- **Presented by:** Prof. Ali Movaghar

### Data Structure and Algorithms

Tehran, Iran

SHARIF UNIVERSITY OF TECHNOLOGY

Feb. 2021 - Jul. 2021

- **Presented by:** Prof. Mohammad Ghodsi and Dr. Mahdi Safarnejad Boroujeni

### Software Engineering

Tehran, Iran

IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

Sep. 2018 - Dec. 2018

- **Presented by:** Dr. Behrouz Minaee

### Systems Analyzing and Designing

Tehran, Iran

IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

Sep. 2018 - Dec. 2018

- **Presented by:** Dr. Mehrdad Ashtiani

### Advanced Computer Programming

Tehran, Iran

IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

Feb. 2016 - Jul. 2016

- **Taught language:** Java

## Selected Courses

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<b>Theory of Distributed Systems</b>	20/20
<b>Randomized Algorithms</b>	18.5/20
<b>Artificial Intelligence and Expert Systems</b>	20/20
<b>Computational Geometry</b>	18.5/20
<b>Foundations of Speech and Language Processing</b>	17.25/20
<b>Verification of Reactive Systems</b>	20/20
<b>Data Structures</b>	18.5/20
<b>Theory of Languages and Automata</b>	19/20
<b>Fundamentals of Database Design</b>	19.5/20
<b>System Analysis and Design</b>	19.5/20
<b>Operating Systems</b>	18/20
<b>Fundamentals of Robotics</b>	18.27/20
<b>Fundamentals of Computational Intelligence</b>	17.25/20
<b>Discrete Mathematics</b>	17/20
<b>Data Communications</b>	17.5/20
<b>Internet Engineering</b>	18/20
<b>Foundations of Computer Vision</b>	17.13/20
<b>Design of Computer Games</b>	17.5/20
<b>Electrical Circuits</b>	20/20

## Projects

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### Energy Coin

IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

May 2020

- Develop and implement a blockchain token to trade electricity in smart electric grid using Hyperledger.

### Guess The Word Game Using Hand Motion Detection

IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

Dec. 2019

- Design and implement a guess the word game using Unity game engine.
- Implemented hand motion detector as inputs to the game using OpenCV and computer vision techniques.

### Peer To Peer Messaging System

IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

Jan. 2019

- Implemented a peer to peer real-time messaging and video calling system using Python, WebSocket and WebRTC.

### Tweet Classifier

IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

Jul. 2018

- Implemented a system to retrieve tweet on a specific hashtag.
- Implemented an NLP language model to classify and predict incoming tweets.

### Car Parking Sensor

IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

Jun. 2018

- Implemented car parking sensor using Arduino and ultrasonic wave sensors in C++ language.

### Moallem Calendar

FREELANCER: MOALLEM COMPANY

May 2018

- Develop Moallem Co. calendar application in iOS and Android platforms using Python and React Native.

### Smart Cemetery Application

FREELANCER: ISFAHAN MUNICIPALITY

Feb. 2018

- Develop iOS application to manage cemetery tombs using Swift.

### Website Interaction Analyzer

IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

Oct. 2017

- Implemented a system to analyze how users are interacting with website (like HotJar) using WebSocket, SocketIO, Node.js, MongoDB.

### Simple Searching Engine

IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

Jul. 2016

- Implemented a simple searching engine which scrape the Web, follow links and classify web pages to have a smarter searching procedure using Python, Selenium.

## Skills

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<b>Languages</b>	Persian and English
<b>Programming Languages</b>	Python, Node.js, Rust, Solidity, C/C++, Java, C, SQL, JavaScript
<b>Data Stores</b>	PostgreSQL, Redis, MongoDB, MySQL
<b>Industry Knowledge</b>	Blockchain, Web3, Machine Learning, Reinforcement Learning, Backend, Frontend, Database Design, Model Checking
<b>Web Frameworks</b>	Flask, Django, Express.js, React
<b>Other Softwares</b>	GIT, Docker, Anchor, Latex

## Extra Curricular Activities

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### President of Computer Department's Student Council

SHARIF UNIVERSITY OF TECHNOLOGY

*Dec 2021 - Dec. 2022*

- Student based organization in the university which is a bridge between students and university authorities and responsible for solving studental problems in areas such as: food, dormitory, education, etc. This council is elected by majority of students' votes.

### Vice-President of University's Student Council

IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

*May 2018 - Nov. 2019*

- Student based organization in the university which is a bridge between students and university authorities and responsible for solving studental problems in areas such as: food, dormitory, education, etc. This council is elected by majority of students' votes.