



KAMRAN MAHMOUDI

MSC. SOFTWARE ENGINEERING

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Summary

Kamran holds a M.Sc. in software engineering from IKIU, Iran. He is interested in Big Data and Hadoop Ecosystem and also Blockchain Development. He is familiar with interdisciplinary studies and research since he has worked in the field of scientific data management in experimental physics experiments conducted at Synchrotrons in collaboration with Iranian Light Source Facility (ILSF). He has 6+ years of experience in software industry working as programmer, software engineer and CEO in several companies and laboratories. *Updated: December 16, 2021*

Education



IMAM KHOMEINI
INTERNATIONAL UNIVERSITY



MSC. SOFTWARE ENG. IKIU, QAZVIN, IRAN [2016-19]

My research experience and topics at Imam Khomeini International University [IKIU] includes: Social network analysis and its various applications in public health sector and marketing, Synchrotron related researches and Information Retrieval. Being a student at IKIU, I also gained some knowledge of bioinformatics, advanced databases and operating systems.

Thesis Title: Managing Scientific Data in Experimental Physics Facilities using Big Data Tools.

Thesis Score: Excellent GPA: 18.17 out of 20 (equivalent to 3.76 or A+)



DATA SCIENCE WINTER SCHOOL, UNIVERSITY OF BONN, BONN, GERMANY [2018]

I was a participant of the data science winter school held in the framework of [GraDAna EU Project](#) with collaboration of several Iranian universities and the University of Bonn, Technical University of Vienna, and Aristotle University of Thessaloniki which focused on elevating needed DA skills of Iranian graduates according to the latest international trends.



BSC. SOFTWARE ENG. K.N. TOOSI UNIVERSITY OF TECHNOLOGY TEHRAN, IRAN [2011-16]

As a student at Khaje Nasir Toosi University of Technology [KNTU], I have extended my programming skills and my understanding of the computer world. I have become interested in digital electronics and robotics during the practical activities in specialized laboratories such as the micro controller lab. I have gained some experience in web technologies and I studied the basics of search engine industry and developed a simple multi-threaded web crawler using VB .Net my favorite programming language.

Final Project: Design and Implementation of a distributed web crawler **Score: 20** out of 20

Work Experience

SOFTWARE ENGINEER - COMMUNICATIONS REGULATORY AUTHORITY (CRA) OF THE IR. IRAN, TEHRAN, IRAN | 2020 - PRESENT

I am doing my military service as a software engineer at CRA working on business intelligence and process management projects of the Quality Assurance and Organizational Architecture Group.

CEO - DATA IN SCIENCE LABORATORY (DISL), QAZVIN, IRAN | 2018-2020

I worked as projects coordinator and CEO at DiSL laboratory (Jooyandegan Masir Pishraft Parsian Ltd.) that I co-founded at IKIU's Start-up Incubator and Entrepreneurship Center. At DiSL we have worked on cognitive science and gamification projects and also data science and scientific big-data processing and management.

RESEARCH ASSISTANT – IMAM KHOMEINI INTERNATIONAL UNIVERSITY, IRAN | 2018-2019

I worked in research topics related to Big Data Analytics and Private Cloud Services and Distributed Computing.

PROGRAMMER & PROJECT MANAGER – BAHARSOUND LTD., TEHRAN, IRAN | 2015-2019

I worked as a part time web developer and windows applications programmer and my responsibilities include creating, maintaining and developing websites and designing of monitoring applications to collect statistical data for reports generation based on users and employee's activities.

CEO – RAYANESH ABRI BEHRAVAND TAKTAZ LTD., TEHRAN, IRAN | 2014-2018

I Founded the SME in the last year of my under graduate studies at KNTU with the aim of working in new technologies and development of customized web applications.

DIRECTOR OF INFORMATION TECHNOLOGY – TALENT IDENTIFICATION COMMITTEE OF SPORTS SHOOTING BOARD OF TEHRAN, IRAN | 2015-2016

As chief information officer I was responsible for managing computer systems and website of the talent committee of sports shooting of Tehran.

Volunteer Experience

HEAD OF THE RESEARCH COMMITTEE – THE COGNITIVE SCIENCE INTERDISCIPLINARY SCIENTIFIC ASSOCIATION (CSISA) – IMAM KHOMEINI INTERNATIONAL UNIVERSITY (IKIU), QAZVIN, IRAN | 2020

In collaboration with graduate students of IKIU and active members of the DiSL laboratory we have established the Cognitive Science Interdisciplinary Scientific Association (CSISA) recognized by the Deputy for Cultural and Social Affairs where I served as head of research committee member for the first year.

RESEARCH ASSISTANT– IRANIAN LIGHT SOURCE FACILITY (ILSF) - INSTITUTE FOR RESEARCH IN FUNDAMENTAL SCIENCES (IPM), TEHRAN, IRAN | 2017-2019

I have participated in research activities for basic design of the Iranian Light Source Facility as a graduate student research assistant in cooperation with the ILSF control group and under supervision of Dr. A. Khaleghi.

TEACHING ASSISTANT– IMAM KHOMEINI INTERNATIONAL UNIVERSITY QAZVIN, IRAN | 2018-2019

As a teaching assistant of the Big Data Analysis Systems at IKIU I have lectured on technical details of Installation and Deployment of Hadoop Ecosystem tools and got involved with grading assignments and coordinating hands-on projects.

Skills & Abilities

- **Big Data Engineering**

I am familiar with the concepts and applications of Big Data, Apache Spark, Hadoop ecosystem and MapReduce Algorithm.

- **Web Design and Development**

I am a skilled web developer with quite good experience in web technologies like PHP, JavaScript, jQuery, HTML & CSS and I am also skilled at WordPress Content Management System and e-learning management system (Moodle).

- **Information Retrieval and Web Scrapping**

I am skilled at data extraction from the Web and I have designed and implemented several web crawlers to extract and process data from social networking web sites and other different sources and I am familiar with the concepts of search engine design.

- **Relational & NoSQL Database Management**

I am skilled at database design and administration using MySQL, SQL Server and Neo4j.

- **Programming**

I am experienced in Visual Basic .Net and C++ Programming Languages and I am familiar with Java and Python.

Projects

- Design and Development of Web Application for Operations System of Exir Chemical Terminal
- Software Architecture of a Distributed Learning Platform for the Educational Research and Planning Organization of I.R. Iran Education Ministry
- Developing WordPress Plugin to connect a local retail software "Rahkaran System API"
- Design of a vertical search engine for indexing scientific data generated by different Synchrotrons.
- Scientific Data Management in experimental physics facilities using Big Data Tools
- Design of an IR system with query expansion feature based on semantic relations of terms
- Implementation of DNA Sequencing simulator using VB.net
- Social Data integration using Neo4J Graph Database and VB.net
- Report Generating Application for monitoring "eshia.ir" statistics
- Design and implementation of a Boolean IR system in C++
- Design and implementation of a multi-threaded web crawler
- Database design for an OTT application and other projects (SQL SERVER, MySQL)

Publication

Conference Paper: Ali Khaleghi, M. Akbari, *K. Mahmoudi*, S. Mahmoudi " **Study and Design of the Appropriate High-Performance Computing System for Beamline Data Analysis Application at Iranian Light Source Facility (ILSF)**", 12th International Particle Accelerator Conference - IPAC'21, Campinas, Brazil. May 2021.

Conference Paper: *Kamran Mahmoudi*, Hadi Haedar, Ali Khaleghi, M. Akbari, S. Mahmoudi " **Study and Design of a High-Performance Computing Infrastructure for Iranian Light Source Facility Based on the Accelerator Physicists and Engineers' Applications Requirements**", 12th International Particle Accelerator Conference - IPAC'21, Campinas, Brazil. May 2021.

Conference Paper: *Kamran Mahmoudi*, Ali Khaleghi, T. Parvini, H. Barjini, J. Rahighi, M. Akbari, M. Jafarzadeh, F. Mehrabi, A. Khalilzadeh, P. Navidpoor, S. Mohammadi. " **Managing Scientific Data in Experimental Physics Facilities using Big Data Tools.**" 4th Iranian Particle Accelerator Conference, K.N. Toosi University of Technology, Tehran, Iran. December 2019.

Conference Paper: Iman Imani, Ali Khaleghi, Hadi Haedar, *Kamran Mahmoudi*, J. Rahighi, T. Parvini, M. Akbari, M. Jafarzadeh, F. Mehrabi, A. Khalilzadeh, P. Navidpoor, S. Mohammadi. " **Comparing Apache Spark and Apache Flink on Clustering Crystallographic Data.**" 4th Iranian Particle Accelerator Conference, K.N. Toosi University of Technology, Tehran, Iran. December 2019.

Journal Article: Ali Khaleghi, *Kamran Mahmoudi*, and Sonia Mozaffari. " **Design of a vertical search engine for synchrotron data: a big data approach using Hadoop ecosystem.**" S.N. Applied Sciences. Springer, Switzerland, 1, 1704 November 2019. DOI: <https://doi.org/10.1007/s42452-019-1582-1>

Book Chapter: Hosseinnia, Fateme, Ali Khaleghi, and *Kamran Mahmoudi*. " **Using Gamification Based on Virtual Reality Mobile Platform for Treatment of Adults with Amblyopia.**" Interactive Mobile Communication, Technologies and Learning. Springer, Cham, (pp. 836-843) October 2019. DOI: https://doi.org/10.1007/978-3-030-49932-7_78

Conference Paper: Hadi Haedar, *Kamran Mahmoudi*, Ali Khaleghi, Mohsen. Akbari " **Design of high-performance computing system suitable for applications of accelerator physicists.**" 4th National Congress of Fundamental Research in Computer Engineering and IT, K.N. Toosi University of Technology, Tehran, Iran. June 2019.

Conference Paper: Hadi Haedar, *Kamran Mahmoudi*, Ramin Vakili, Farzaneh Khorasani " **Investigating the effect of using thesaurus to expand user queries in the binary information retrieval system**" 4th National Congress of Fundamental Research in Computer Engineering and IT, K.N. Toosi University of Technology, Tehran, Iran. June 2019.

Conference Paper: Ali Khaleghi, M. Akbari, J. Rahighi, *K. Mahmoudi*, M. Hosseinzadeh " **Conceptual Design of Developing a Mobile App for Distributed Information Services for Control Systems (DISCS).**", 16th Int. Conf. on Accelerator and Large Experimental Control Systems, Barcelona, Spain. October 2017, JACoW Publishing ISBN:978-3-95450-193-9 DOI: <https://doi.org/10.18429/JACoW-ICALPCS2017-TUMPL06> .

Conference Paper: *Kamran Mahmoudi*, Ali Khaleghi " **Bug Tracking Systems: Features and Challenges**" 2nd national conference on interdisciplinary research in Computer, Electrical, Mechanical & Mechatronics engineering, Buinzahra Technical University, Qazvin, Iran. September 2017.

Conference Paper: Atieh Rahbari Manesh, *Kamran Mahmoudi* " **An overview of the concepts and applications of data mining in social network analysis**" 4th international Conference on Electrical and Computer Engineering, Tehran, Iran. January 2017.

Conference Paper: *Kamran Mahmoudi*, Hojatolah Hamidi " **Design & Implementation of a Distributed Web Crawler**" International conference in new research of electrical engineering and computer science, University of Tehran, Iran. September 2015.

Lectures, Workshops & Presentations

- Presentation on **Data Science for Scientific Data**
 - Iranian Light Source Facility 10th Users' Meeting, May 2018
- Workshop on **Data Mining and Information Retrieval**
 - Institute for Research in Fundamental Sciences (IPM), February 2018
- Lecture on **Big Data & Hadoop Framework**
 - Imam Khomeini International University, Fall & Winter Semesters 2018-19
- Presentation on **Bug Tracking Systems: Features and Challenges**
 - Buinzahra Technical University, September 2017
- Workshop on **WordPress Web Design"**
 - University of Applied Science & Technology, March 2017

Languages

- English (Professional working proficiency)
- Persian (Native or bilingual proficiency)
- Azerbaijani (Elementary proficiency)

Certifications



Verified International Academic Qualifications

World Education Services (wes.org)

Issued: 2021 - No Expiration Date

Credential ID: [5344418IMM](#)

The Fundamentals of Digital Marketing

Google Digital Garage

Issued: 2021 - No Expiration Date

Credential ID: 55S R7F ZWY

Data Science & Big Data Engineering

- *Learning Docker*
- *Docker for Data Scientists*
- *Learning Hadoop*
- *Hadoop for Data Science Tips, Tricks, & Techniques*
- *Big Data Analytics with Hadoop and Apache Spark*
- *Apache Spark Essential Training: Big Data Engineering*
- *Apache PySpark by Example*
- *Azure Spark Databricks Essential Training*
- *Data Science on Google Cloud Platform: Exploratory Data Analytics*
- *Applied Machine Learning: Foundations*
- *Applied Machine Learning Algorithms*
- *Introduction to Deep Learning with OpenCV*
- *Spark for Machine Learning & AI*
- *Apache Spark Deep Learning Essential Training*
- *Building and Deploying Deep Learning Applications with TensorFlow*
- *Essential Math for Machine Learning: Python Edition*

Software Development & Programming

- *C++: Advanced Topics*
- *Learning Java*
- *Java 8 Essential Training*
- *Parallel and Concurrent Programming with Java 1*
- *Bash Shell Scripting for Automation*
- *Web Scraping with Python*
- *Software Architecture: From Developer to Architect*
- *Kubernetes Essential Training: Application Development*
- *AWS Essential Training for Developers*
- *Google Cloud Platform for Enterprise Essential Training*

Blockchain

- *Blockchain Basics*
- *Blockchain: Beyond Basics*

Soft Skills

- *Professional Networking*
- *Managing Stress*
- *Developing your Emotional Intelligence*

LinkedIn Learning Platform

Issued: 2021 - No Expiration Date



Advanced Smart Manufacturing 101 in a Blockchain-driven Era

Asian Productivity Organization – Tokyo, Japan

Issued: Oct. 2021 - No Expiration Date

Credential ID: sBfaQDDYzq

Basic Smart Manufacturing 101 in a Blockchain-driven Era

Asian Productivity Organization – Tokyo, Japan

Issued: 2021 - No Expiration Date

Credential ID: ooZhGdn3bw



FazaNo Business School

Nextera Innovation Center, University of Tehran

Issued: 2019 - No Expiration Date

Credential ID: -



Cognitive Neuroscience Summer School

Iranian Neuroscience Society

Issued: 2019 - No Expiration Date

Credential ID: -



TechStars Startup Weekend

University of Tehran Counseling Center

Issued: 2019 - No Expiration Date

Credential ID: 135/311200



Blockchain & Digital Currencies

ISIC - University of Tehran

Issued: 2018 - No Expiration Date

Credential ID: 97159301

Certificate of Presentation: Information Retrieval & Data Mining

Institute for Research in Fundamental Sciences, Grid Computing Group

Issued: 2018 - No Expiration Date

Credential ID: -

Erasmus+ Winter School (Data Science)

Institut für Informatik III - Universität Bonn

Issued: 2018 - No Expiration Date

Credential ID: -

Big Data Analysis

Cloud Computing and OpenStack

Institute for Research in Fundamental Sciences, Grid Computing Group

Issued: 2017 - No Expiration Date

Credential ID: -

Big Data Architecture on Cloud Computing Infrastructure

IEEE Iran Section – University of Science & Culture

Issued: 2017 - No Expiration Date

Credential ID: -

Web Security

Linux Web Services

Linux Systems Maintenance

Sharif University of Technology

Issued: 2017 - No Expiration Date

Credential ID: 0015874788

Air Rifle & Pistol Shooting Referee License

I.R. Iran Sports Shooting Federation

Issued: 2015 - No Expiration Date

Credential ID: 8242

Linux-LPIC-1

Iran Info-Tech Development

Issued: 2014 - No Expiration Date

Credential ID: -

Network+

Iran Info-Tech Development

Issued: 2014 - No Expiration Date

Credential ID: -

Certified Ethical Hacker (CEH)

Iran Info-Tech Development

Issued: 2014 - No Expiration Date

Credential ID: -



English as a Second Language (ESL)

Shokouh's English Institute

Issued: 2007 - No Expiration Date

Credential ID: 13030788



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References

Ali KHALEGHI



PhD in Information Technology, Grenoble-Alpes University, France - CERAG Laboratory

Assistant Professor, Imam Khomeini International University (IKIU).

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Memberships and Organizations

- Iranian ICT Guild organization
- Informatics Society of Iran
- K.N. Toosi University of Technology Alumni
- Imam Khomeini International University Alumni
- IEEE Iran Section and Computer Society
(Graduate Student Member #94075491 | 2017 - 2019)
- Iranian Research Institute for Information Science and Technology



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