

CURRICULUM VITAE

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PERSONAL INFO.

Name: Ali Asghar Safaei

Affiliation: Associate Professor, Department of Medical Informatics and Data Science, Tarbiat Modares University, Tehran, Iran.

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Birth date: Feb., 24, 1979

Postal address: Department of Medical Informatics, Faculty of Medical Sciences, Tarbiat Modares University, P.O. Box 14115-331, Tehran, Iran.

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EDUCATION:

2005-2011 **Ph.D. in Computer Engineering** (Software)

Iran University of Science and Technology, Tehran, Iran.

Ph.D. Thesis: Real-Time Query Processing in Data Stream Management System

Supervisor: Dr. M. Haghjoo

Advisor: Prof. M. Sharifi

2001-2004 **M.Sc. in Computer Engineering** (Software)

Ferdowsi University, Mashhad, Iran.

M.Sc. Thesis: MPLS Traffic Engineering Using Constraint-Based Routing

Supervisor: Prof. M. H. Yaghmae Moghadam

1997- 2001 **B.Sc. in Computer Engineering** (Software)

Shahid Sattari Air University, Tehran, Iran.

RESEARCH INTERESTS:

- o Data Science and Data Management in Healthcare (Big Data, Data Mining, etc.)
- o IoT, Pervasive Medical Systems and Wearable Technologies
- o Virtual and Augmented Reality in Healthcare
- o Bioinformatics and Personalized Medicine
- o Cognitive Knowledge Discovery and Management

HONORS:

- o Distinguished Researcher, Tarbiat Modares University, 2021
- o Awarded First Rank in B.Sc. in Computer Engineering at Air University, 2001.

WORK EXPERIENCE:

March 2021- present

RahNama Startup Company (Indoor Positioning and Navigation System)

CEO and Co-Founder

Dec. 2020 – present

Tarbiat Modares University, Tehran, Iran

BIOMEDICAL INFORMATICS DEPARTMENT (Associate Professor)

Sep. 2018- present

Tarbiat Modares University, Tehran, Iran

DATA SCIENCE DEPARTMENT (Adjunct Professor)

Feb 2018 – March 2021

Padidar-VR Startup Company (Augmented and Virtual Reality Application Development for Medical and Healthcare)

CEO and Co-Founder

March 2017- Jan 2023

Tarbiat Modares University

DEPARTMENT OF BIOMEDICAL INFORMATICS (Head of the Department)

March 2016 - Sep.2016

ORCHID Pharmed Company

IT Consultant

Dec.2014 - March 2017

Ministry of Science, Research and technology

RAIRO Office (Vice-chancellor of general manager)

Feb. 2014 – Dec. 2020

Tarbiat Modares University, Tehran, Iran

BIOMEDICAL INFORMATICS DEPARTMENT (Assistant professor)

June 2013- Feb 2014

K.N. Toosi University of Technology, Tehran, Iran

COMPUTER ENGINEERING Faculty (Dean of F. & H. R.)

Sep. 2012- Feb. 2014

K.N. Toosi University of Technology, Tehran, Iran

COMPUTER ENGINEERING DEPARTMENT (Assistant professor)

Sep. 2008- Sep. 2012

ISIRAN Company, Tehran, Iran

FUNDAMENTAL SOFTWARES R&D CENTER (TECHNICAL VICECHANCELLER), NATIONAL DBMS DEVELOPMENT (PROJECT MANAGER)

2001-2003

Iran Telecommunication Research Center (ITRC), Tehran, Iran

RESEARCHER

TEACHING EXPERIENCE (postgraduate):

- Data Mining and Knowledge Discovery from Data
- Medical Software Design
- BioInformatics
- Data-Intensive Computing
- Clinical Decision Support Systems (CDSSs)
- Electronic Health Record (EHR) Systems
- Medical Information Systems: Design and Evaluation
- Distributed Systems
- Database Security
- Advanced Databases/ Modern Data Management
- Advanced Software Engineering
- Free/Open Source Software (FOSS) Development

PUBLICATIONS:

BOOKS:

1. Safaei, Ali A. "**Parallel processing of data streams**", LAP LAMBERT AcademicPublishing, 2017.
2. Haghjoo Mostafa S., Safaei Ali A., "**Database Systems: Theory and Application**", 2nd volume: Advanced Concepts, Iran University of Science and Technology publications, 2007 (in Persian).

JOURNAL PAPERS:

1. Forouzeshefara P., Safaei A. A., Ghaderid F., Hashemikamangar S., Kaviani, H., Haghi S., "**Dental Caries Diagnosis using Neural Networks and Deep Learning: A Systematic Review**", Journal of Multimedia Tools and Applications, 2023.
2. Safae S, Mirabi M, Rahmani AM, Safaei AA. "**A distributed B+ Tree indexing method for processing range queries over streaming data**", Cluster Computing. 2023 May 7:1-24.

3. Alahdadi A., Safaei A.A., Ebadi M. J., “**A truthful and budget-balanced double auction model for resource allocation in cloud computing**”, Journal of Soft Computing, 2023 Apr 18:1-22. <https://doi.org/10.1007/s00500-023-08081-4>
4. Kazemzadeh F., Safaei A.A., Mirzarezaee M., Afsharian S., Kosarirad H., “**Determination of Influential Nodes based on the Communities’ Structure to Maximize Influence in Social Networks**”, Neurocomputing, 2023 May 14;534:18-28. <https://doi.org/10.1016/j.neucom.2023.02.059>
5. Anvari Sadi Z., Safaei, A.A., “**A Narrative Review of Blockchain in Healthcare: Applications and challenges**”, Journal of Health and Biomedical Informatics, 9(3) 2022 [doi: 10.34172/jhbmi.2022.07](https://doi.org/10.34172/jhbmi.2022.07)
6. Fouladi, S., Safaei, A.A., Arshad, N.I. Ebadi M. J., Ahmadian A., “**The use of artificial neural networks to diagnose Alzheimer’s disease from brain images**”. Multimedia Tools and Applications 2022. <https://doi.org/10.1007/s11042-022-13506-7>
7. Fouldai S., Safaei A. A., Ebadi M. J., Mammone N., Ghaderi F., “**Efficient Deep Neural Networks for Classification of Alzheimer’s disease and Mild Cognitive Impairment from Scalp EEG Recordings**”, Cognitive Computation 2022 Jun 6:1-22
8. Tanhapour M, Safaei A. A, Shakibian H. “**Personal health record system based on social network analysis**”. Multimedia Tools and Applications. 81(19) 27601–27628 2022 <https://doi.org/10.1007/s11042-022-12910-3>
9. Kazemzadeh F, Safaei A. A, Mirzarezaee M. “**Influence maximization in social networks using effective community detection**”. Physica A: Statistical Mechanics and its Applications. 2022 Apr 4:127314.
10. Alamdari PM, Navimipour NJ, Hosseinzadeh M, Safaei A. A, Darwesh A. “**An image-based product recommendation for E-commerce applications using convolutional neural networks**”. Acta Informatica Pragensia. 2022;11(1):15-35.
11. Mostajabi F, Safaei A. A, Sahafi A. “**A Systematic Review of Data Models for the Big Data Problems**”. IEEE Access. 2021 Sep 14. doi: 10.1109/ACCESS.2021.3112880
12. Safaei A. A. “**Hybrid fragmentation of medical images’ attributes for multidimensional indexing**”. Cluster Computing. 2022 Feb; 25(1):215-30. [DOI:10.1007/s10586-021-03356-7](https://doi.org/10.1007/s10586-021-03356-7).
13. Safaei A. A. “**Text-based multi-dimensional medical images retrieval according to the features-usage correlation**”. Medical & Biological Engineering & Computing. 2021 Oct;59(10):1993-2017.. <https://doi.org/10.1007/s11517-021-02392-0>
14. Fouladi Saman, Ebadi M.J., Safaei Ali A., Bajuri Mohd Yazid, Ahmadian Ali, “**Efficient deep neural networks for classification of COVID-19 based on CT images: Virtualization via software defined radio**”, Journal of Computer Communications, (2021). Volume 176, Pages 234-248 <https://doi.org/10.1016/j.comcom.2021.06.011>
15. Safaei Ali A., and Saeede HabibiAsl. “**Diamond: multi-dimensional indexing technique for medical images retrieval using vertical fragmentation approach.**” Journal of Supercomputing, 2021, 77(7), 7089-7148.
16. Rezayi Sorayya, Safaei Ali A., Mohammadzadeh Niloofar, “**Design and Evaluation of a Wearable Smart Blanket System for Monitoring Vital Signs of Patients in an Ambulance**”, Journal of Sensor, Volume 2021, Article ID 8820740, 11 pages.
17. Narges Momenian, Safaei, Ali A, Sedigheh HantooshZadeh, “**Immersive Virtual Reality Analgesia in Un-medicated Laboring Women (during stage 1 and 2): A Randomized**

- Controlled Trial**", Clinical and Experimental Obstetrics & Gynecology 48.1 (2021): 110-116.
18. Safaei A. A., Habibi-Asl S. "**Multidimensional indexing technique for medical images retrieval**". Intelligent Data Analysis. 2021 Jan 1;25(6):1629-66.
 19. Malekpour Alamdari Pegah, Jafari Navimipour Nima, Hosseinzadeh Mehdi, Safaei Ali A., and Darwesh Aso. "**A Systematic Study on the Recommender Systems in the E-Commerce.**" IEEE Access 8 (2020): 115694-115716
 20. Fouladi S, Safaei Ali A. "**Differential Diagnostic Methods for Cognitive Disorders Using Neural Networks Based on Electroencephalogram Signals: A Systematic Review.**" Shefaye Khatam. 2020; 9 (1) :152-165
 21. Safaei Ali A., and Safaei Sayyed Saeid. "**Modeling a semantic recommender system for medical prescriptions and drug interaction detection.**" Koomesh 22, no. 1 (2020): 145-154.
 22. Jafari, Akbar, and Safaei Ali A. "**Design and Review of Virtual Reality (VR) System for Treating Patients with Height and Darkness Phobia.**" Journal of Payavard Salamat 13, no. 6 (2020): 439-449.
 23. Yazdani, Azita, Safaei Ali A., Reza Safdari, and Maryam Zahmatkeshan. "**Diagnosis of Breast Cancer Using Decision Tree, Artificial Neural Network and Naive Bayes to Provide a Native Model for Fars Province.**" Journal of Payavard Salamat 13, no. 3 (2019): 0-0.
 24. Sadoughi F, and Safaei Ali A. "**Investigation of real-time locating systems technologies in the healthcare field: A review study.**" Journal of Health Administration 22, no. 1 (2019): 26-39.
 25. Rezayi S, Safaei Ali A., Mohammadzadeh N, "**Requirement Specification and Modeling a Wearable Smart Blanket System for Monitoring Patients in Ambulance**", Journal of Medical Signals & Sensors, 2019.
 26. Mozghan Tanhapour and Ali Asghar Safaei, "**Specification of a social network-based PHR**", International Journal of Electronic Healthcare, 2019, 10(4), pp.249-274.
 27. GholamHoseini L., Sadooghi F, Safaei Ali A., "**Hospital Real-Time Location System: A Practical Approach in Healthcare.**" Iranian journal of Public Health, 2019
 28. Safaei, Ali A., and Safaei Sayyed Saeid. "**Requirement specification of an ontology-based semantic recommender system for medical prescriptions and drug interaction detection.**" International Journal of Electronic Healthcare 11, no. 1 (2019): 1-24.
 29. Rezayi, S, and Safaei Ali A. "**Wearable smart blanket system model for monitoring the vital signs of patients in ambulance.**" Researcher Bulletin of Medical Sciences 1, no. 24 (2019): e24-e24.
 30. Feizmanesh F, Safaei Ali A. "**Determining the Risk Factors and Presenting a Prognostic Model for Pulmonary Embolism in Hospitalized Patients using Bayesian Networks**". Iranian Journal of Epidemiology. 2018; 14 (3) :272-282
 31. Tanhapour M, Safaei Ali A. "**Requirements Specification of Creating a Hybrid Model of PHR Based on Social Networking**". Journal of Payavard Salamat . 2018; 11 (6) :618-631
 32. Feizmanesh F, Safaei Ali A., Gohari Moghadam K. "**Determination of risk factors for predicting pulmonary embolism using Bayesian networks.**" Koomesh. 2018; 20 (4) :657-666

33. Delaram Z, Safaei Ali A, Atashi A. **"Conceptual Modeling and Evaluation of Tele-Psychotherapy System based on Self-inventory for Patients with Depression."** Journal of Health and Biomedical Informatics. 2018; 5 (1) :1-11
34. Feizmanesh F, Safaei Ali A. **"Review of the Approaches and Techniques of Text Mining in Clinical Documentation."** Journal of Health and Biomedical Informatics. 2018; 5 (2) :314-324
35. Rezayi S, Safaei Ali A, Mohammadzadeh N. **"The Usages of Body Area Sensor Networks: Review on References."** Journal of Payavard Salamat. 2018; 11 (6) :694-703
36. Rezayi Sorayya, Safaei Ali A, **"A Narrative Review of the Taxonomy of Wearable Monitoring Technologies in Medical Applications"**, Health Information Management, (2017): 37-43
37. Tanhapour M, Safaei Ali A. **"Designing and Modeling Personal Health Record Systems based on Health Social Network"** Journal of Health and Biomedical Informatics. 2017; 4 (3) :168-180
38. Aliabadian, Mojtaba , Safaei Ali A **"Improving the Efficiency of Cloud Computing Services Using Cuckoo Search and Bee Colony Algorithms."** Journal of Global Pharma Technology 8.12 (2017).
39. Mosaferi M., Safaei Ali A. **"Providing a Dynamic Technique for Answering Ad-hoc Continuous Aggregate Queries."** Journal of Signal and Data Processing. 2017; 14 (3) :3-22
40. Safaei, Ali A. **"Real-time processing of streaming big data."** Real-Time Systems 53.1 (2017): 1-44.
41. Safaei, Ali A, Mehdi Mosaferi, and Fatemeh Abdi. **"Answering ad-hoc continuous aggregate queries over data streams using Dynamic Prefix Aggregate Tree."** Intelligent Data Analysis 20.6 (2016): 1351-1384.
42. Habibi Asl, Saeide, and Safaei Ali A. **"Medical image retrieval approaches, methods and systems: A systematic review."** Pajoohandeh Journal 21.2 (2016): 61-73.
43. Haratian N., Safaei Ali A, **"Cloud services discovery through Ontology Evolution in Persian language"**, Soft Computing Journal, 4 (2), 2016. (in Persian)
44. Rezaei S, Safaei Ali A. **"A Systematic Review of Wearable Technologies and their Applications in Health."** Journal of Health and Biomedical Informatics. 2016; 3 (3) :233-242
45. Shahmoradi M., Safaei Ali A, H. Tajrishi, E. Nazari, Z. Delaram, Z. Zarei, N. Zeinali, **"Common Applications of Social Networking in Medicine and Health"**, Journal of Health Information Management, 13 (3), 2016.
46. Iranpour A., Safaei Ali A, Sahafi A., **"Distributed Task Scheduling Algorithm for Grid Computing based on Learning Automata"**, Computing Science Journal, 1 (1), 2016. (in Persian)
47. Naseh E., Safaei Ali A, **" A Gene Structure Prediction Model using Bayesian Algorithm and the Nearest Neighbor"**, International Journal of Computer Applications Technology and Research 5 (8), 509 - 515, 2016.
48. Naseh E., Safaei Ali A, **"The Presentation of a Genetic Algorithm to Solve Steiner Tree"**, International Journal of Computer Applications Technology and Research 5 (8), 516 - 518, 2016.
49. Moosaei R., Safaei Ali A, **"Classification of service delivery to airport passengers using data mining"**, International Journal of Advanced and Applied Sciences, 3(6) 2016, Pages: 87-94

50. Tanhapour, Mozghan, and Safaei Ali A. "**Specification of requirements for health socialnetwork as Personal Health Record (PHR) system.**" Tehran University Medical Journal TUMS Publications 73.6 (2015): 431-441.
51. Shahmoradi, Mehrnoosh, Safaei Ali A. "**The role of social networks in healthcare: applications and limitations.**" Journal of Health and Biomedical Informatics 2.2 (2015): 124-128.
52. Abdi Fatemeh, Safaei Ali A., "**Mining Frequent Patterns in Uncertain and Relational Data Streams using the Landmark Windows**", Journal of Advances in Computer Engineering and Technology, 1(4) 2015.
53. Setareh, Sougand, Safaei Ali A., and Najafi Farid. "**Using machine learning techniques to differentiate acute coronary syndrome.**" Journal of Kermanshah University of Medical Sciences 18.11 (2015): 631-639.
54. Abdi F., Safaei Ali A., "**Processing Ad-hoc Continuous Aggregate queries**", Indian J. Sci. Res 7 (1), 1001-1010 (2014).
55. Safaei A. A., M. S. Haghjoo, "**Parallelism of Data Streams**", Journal on Computer Science and Engineering (JCSE), 11(2), 11-29, (2013).
56. Tajalli-Pour B., Safaei Ali A., "**Syntax and Semantic Analysis of SQL-Injection Attacks**", Electronic and Cyber Defense Journal, 1(2): 53-69, (2013). (in Persian)
57. Safaei A. A., Sharifrazavian A., Sharifi M., Haghjoo M. S., "**Dynamic Routing of Data Stream Tuples among Parallel Query Plan Running on Multi-core Processors**", Journal of Distributed and Parallel Databases, 30(2): 145-176, (2012) (DOI: 10.1007/s10619-012-7090-6).
58. Safaei A. A., Haghjoo M. S., "**Dispatching of Stream Operators in Parallel Execution of Continuous Queries**", Journal of Supercomputing, Volume 61, Number 3 (2012), 619-641, DOI: 10.1007/s11227-011-0621-5
59. Mohammadi Sh., Safaei A. A., Abdi F. and Haghjoo M. S., "**Adaptive Data Stream Management System Using Learning Automata**", Advanced Computing: An International Journal (ACIJ), Vol.2, No.5, September 2011.
60. Safaei, Ali A., Mallah M. "**Semantic Cache Schema for Continuous k-NN Queries in Mobile DBS.**" Information Technology Research Journal 1.1 (2011).
61. Safaei Ali A., Alemi M., Haghjoo Mostafa S., Mohammadi Sh., "**Hybrid Multiprocessor Real- Time Scheduling Approach**", International Journal of Computer Science Issues, Vol. 8, Issue 2, March 2011.
62. Safaei Ali A., Haghjoo M. S., "**Parallel processing of continuous queries over data streams**", Journal of Distributed and Parallel Databases, (28)2: 93-118, (2010) (DOI: 10.1007/s10619- 010-7066-3).
63. Safaei Ali A., Pirshayan R., Haghjoo M. S., "**Modeling Heterogeneous Dimensions in Multi-Dimensional Databases**", International Journal of Computer Science and Research, Vol. 1 Issue 1, 2010.
64. Safaei Ali A., Haghjoo M. S., "**Using Finite State Machines in Processing Continuous queries**", Journal of International Review on Computers and Software (IRECOS), 4(5): 551-556, (2009).

BOOK CHAPTER:

1. Safaei Ali A., Haghjoo M. S., Abdi F., "**PFGN: A Hybrid Multiprocessor Real-Time Scheduling Algorithm for Data Stream Management Systems**", International

- Conference on Digital Information and Communication Technology and its Applications (CCIS Springer Book Series), 180-192, (2011).
2. Alemi M., Safaei Ali A., Haghjoo M. S., Abdi F., “**PDMRTS: Multiprocessor Real-Time Scheduling Considering Process Distribution in Data Stream Management System**”, International Conference on Digital Information and Communication Technology and its Applications (CCIS Springer Book Series), 166-179, (2011).
 3. Safaei Ali A., Haghjoo Mostafa S., Ghalambor M., “**GMTM: A Grid Transaction Management Model**”, Advances in Computer Science and Engineering (CCIS Springer Book Series), 2009, Volume 6, Part 2, 786-789, DOI: 10.1007/978-3-540-89985-3_103

INTERNATIONAL CONFERENCE PAPERS:

1. Kazemzadeh F., Karian A., Safaei Ali A. and Mirzarezaee M., “**Intelligent Filtering of Graph Shells in the Problem of Influence Maximization Based on the Independent Cascade Model**,” 2021 7th International Conference on Signal Processing and Intelligent Systems (ICSPIS), 2021, pp. 1-5, doi: 10.1109/ICSPIS54653.2021.9729376.
2. Gholamhosseini, Leila, Sadoughi Farahnaz, Ahmadi Hossein, and Safaei Ali A. “**Health Internet of Things: Strengths, Weakness, Opportunity, and Threats.**” In 2019 5th International Conference on Web Research (ICWR), pp. 287-296. IEEE, 2019.
3. Shirin Jabbari, Safaei Ali A., “**A new method for data security in cloud computing using and Particle Swarm Optimization**”, 2nd International Conference & 3rd National Conference on New Technologies Application in Engineering, Iran, Feb. 2016.
4. Shokouh M, Safaei Ali A. “**Knowledge Extraction form databases**”, in proc. of Int. conf. on computer engineering and information technology, Tehran, Iran, 2016. (in Persian)
5. Marzoogi F, Safaei Ali A. “**A Breast Cancer Diagnosis Model based on Artificial Neural Networks**”, in proc. of Int. conf. on computer engineering and information technology, Tehran, Iran, 2016. (in Persian)
6. Shokouh M, Safaei Ali A. “**Data Mining, Statistics and Machine Learning**”, in proc. of Int. conf. on computer engineering and information technology, Tehran, Iran, 2016. (in Persian)
7. Saydali, Sajad, Parvin Hamid, and Safaei Ali A. “**Classifier Ensemble by Semi-supervised Learning: Local Aggregation Methodology.**” International Doctoral Workshop on Mathematical and Engineering Methods in Computer Science. Springer, Cham, 2015.
8. Setareh S., Safaei Ali A., Najafi F., “**Using machine learning techniques to differentiate Myocardial infarction and Unstable Angina**”, in proc. of the International Conference on Information and Communication Technology, Iran, 2015. (in Persian)
9. Azad M., Safaei Ali A., “**A graph-based data model for HIV diseases efficient for epidemic discovery services**”, in proc. of 2nd congress of electrical engineering, computer science and Information technology, Tehran, Iran, 2015. (in Persian)
10. Safaei Ali A., Zahiri S. A., “**Proper Data Model for Big Data**”, in proc. of the International Conference on Big Data, Iran, 2015. (in Persian)
11. Mohammadi Sh., Safaei A. A., Haghjoo M. S., Abdi F., “**Effective Parameters on Response Time of Data Stream Management Systems**”, in proc of the 10th International Conference on Information and Knowledge Engineering, USA, 2011.
12. Alemi M., Haghjoo M. S., Safaei Ali A., “**Multiprocessor Real-time Scheduling for RTDSMs**”, in proc. of 3rd CEIT conf., Hamedan, Iran, 2011. (in Persian)

13. Safaei Ali A., Haghjoo M., Abdi F., " **On-line Data Stream Query Processing Using Finite State Automata**", in proc. of 4th International Conference on Cooperation and Promotion of Information Resources in Science and Technology, China, 2009.
14. Ghalambor M., Safaei Ali A., Abdollahi M., " **DSMS Scheduling Regarding Complex QoS Metrics**", in proc. of 7th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA-2009), Morocco, 2009.
15. Safaei Ali A., Haghjoo M. S., Abdi F., " **Semantic Cache Schema for Query Processing in Mobile Databases**", in proc. of IEEE ICDIM'08, London, UK, 2008.
16. Safaei Ali A., Kamali M., Haghjoo M. S., Izadi K., " **Caching Intermediate Results for Multiple Query Optimization**", in proc. of 5th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA-2007), Jordan, 2007.
17. Eskandari E., Safaei Ali A., Haghjoo M., " **Memo, a New Approach to Mobile Data Management**", in proc. of IEEE International Conference on Information & Communication Technologies: from Theory to Applications (ICTTA'06), Syria, 2006.
18. aghmae M.H. Y, Safaei Ali A., " **Quality-Of-Service Routing in MPLS Networks Using Bandwidth and Delay Constraints**", in proc. of HetNets'04, West Yorkshire, U.K., 2004.
19. A. A. Safaei, "Design and Construction of Management Information Bases (MIB) for DiffServ MPLS Networks", in proc. of WISICT'04, Mexico, Win2004.
20. Yaghmae M.H., Safaei Ali A., " **Design Of Management Information Base (MIB) for MPLS Routers with Differentiated-Services Capabilities**", in proc. of 11th Iranian Conference on Electrical Engineering (ICEE2003), Iran, 2003.(in Persian)
21. Safaei Ali A., " **MPLS Networks Supporting Differentiated Services**", in proc. of National Computer Conference (NCC2002), Mashhad, Iran, Fall 2002. (in Persian)

Tutorial and Workshops:

- o " **Quality of Service in the Internet**", In the 8th Annual CSI Computer Conference (CSICC2003), Ferdowsi University of Mashhad, Mashhad, Iran (February2003).

Grants and Funds:

- o " **Development of Mobile Application for Prostate Cancer Diagnosis based on Biopsy and MRI using Deep Learning**" joint sponsorship by Iran National Science Foundation (INSF) and National Institute for Medical Research Development (NIMAD), 2022 (Role: PI)
- o " **Observatory of pervasive and effective virtual medical education for situations similar to the global quarantine of Covid-19**" For National Agency for Research in Medical Educations (NASR), 2022 (Role: PI)
- o " **Design and Implementation of a Framework for Development of Virtual/Augmented Reality- Based Medical Education Applications**" For National Agency for Research in Medical Educations (NASR), 2018 (Role: PI)
- o " **Integration of national HPC clusters**" For MSRT, 2016
- o " **Desktop DBMS development**" for ISIRAN company, 2013 (Role: Project manager)
- o " **DBMS Security Architecture Design**" for ISIRAN company, 2012 (Role: PI)
- o " **National DBMS Specification and Conceptual Architecture Design**" for Ministry of Science, Research and Technology and ISIRAN company, 2011 (Role: Project manager)

- “Evaluating insurance companies in information technology employment” for Central Insurance of Iran, 2010 (Role: Project manager)
- “Upgrading IRIMO’s Information Systems” for Iran Meteorological Organization, 2009

Member of Editorial Board

- Journal of Artificial Intelligence and Big Data
- Journal of Data Science and Intelligent Systems

Reviewer of Journals

- J of Big Data
- Supercomputing
- Cloud Computing
- Machine Learning
- Applied Clinical Informatics
- Artificial Intelligence Review
- PLOS ONE
- BMC Medical Informatics and Decision Making
- Sensors

Conference Steering Committees

- Scientific Chair: 2nd National Congress on Medical Informatics, 2018
- and 8th Conference on Electronic Health and its Applications in Iran, 2018
- PC member: ICCKE, 2014
- Scientific Committee member: 25th Electrical Engineering Conference of Iran, 2017
- Scientific Committee member: 7th Conference on Bioinformatics, Iran 2018
- PC member: 26th International conference of Computer Association of Iran, 2020

Member of National or International Academic Associations

- Iranian Association of Medical Informatics
- Iranian Association of C⁴I

Technical Skills

- Data Science

- Python (Libraries: Tensorflow, Keras, Pandas, Numpy, Pytorch, Opencv, Matplotlib, etc.)
- R framework (for data mining and statistical analysis)
- SQL (RDBMSs: MS SQL Server, SQLite) and NoSQL data stores (MongoDB, Redis, Neo4j)
- MS Excel and Tableau (for data engineering and visualization)
- Spark and Hadoop platforms (for data intensive computing using the map-Reduce paradigm)
- MS Azure (for DevOps)

- Healthcare mobile app/cloud-based services development

- Mobile application or web-based services of the constructed data-driven decision models: Prostate Cancer diagnosis mobile app, Dental Screening app, etc.
- Development of information system software using NoSQL (e.g., eCRF for the study of COVID-19 vaccines using the Document-based data model and the MongoDB)

- **Virtual / Augmented Reality**

- Familiar with the *Unity* and *Unreal* VR engines, *ARKit*
- Development of VR-based medical education applications for training procedures (e.g., LP, Abdominal synthesis, etc) using the *Unity* and *Unreal* engines
- Development of AR-based Rehabilitation applications (e.g., Parkinson rehab package using Xbox Kinect)
- *MedUnity* VR Dev Framework: development of medical version of the *Unity* by including libraries of 3D models of organisms and medical devices and instruments

- **IoT**

- at *RahNama* startup co.: development of a cloud-based integrated outdoor-indoor Positioning and Navigation System (IPS), based on the Anyplace open source software, revising both of the backend and frontend sides to improve the accuracy (< 2 m) and efficiency (< 10 s) of positioning and providing various utilities for different editions for different settings (i.e., shopping mall, hospital (RTLS), airport, exhibition)