CV

Name: **Dr. Sina Fathi**

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Education:

- 2015-2021   PhD in Medical Informatics, Iran University of Medical Sciences (IUMS)
- 2011-2014   M.Sc. in Medical Informatics, Shiraz University of Medical Sciences (SUMS)
- 2006-2010   B.Sc. in Information Technology Engineering, University of Kurdistan

Employment:

- 2023-Now   Associate Professor in Medical Informatics, Shahid Beheshti University of Medical Sciences

Teaching Experience:

- Excel basics and database design with SQL Server (As a teacher assistant) – B.Sc. of Health Information Technology
- Neural Networks and Intelligent Systems in Medicine – M.Sc. of Medical Informatics
- Information Technology – B.Sc. of Health Information Technology
- Health Informatics - B.Sc. of Health Information Technology

Ph.D. and Master Theses:

- Designing a system for integrity control of digital medical images using Watermarking (M.Sc)– Supervisors: Dr. Mohtaram Nematollahi, Dr. Ali Zamani – Advisor: Dr. Roksana Sharifian
- Designing a clinical decision support system for early diagnosis of Alzheimer's disease (PhD)- Supervisor: Dr. Maryam Ahmadi – Advisors: Dr. Mostafa Almasi, Dr. Afsaneh Dehnad

Publications:

- **Fathi S**, Ahmadi M, Dehnad A. Early diagnosis of Alzheimer's disease based on deep learning: A systematic review. Computers in biology and medicine. 2022 Jul 1;146:105634.
- **Fathi S**, Ahmadi M, Birashk B, Dehnad A. Development and use of a clinical decision support system for the diagnosis of social anxiety disorder. Computer Methods and Programs in Biomedicine. 2020 Jul 1;190:105354.
- Papi Z, **Fathi S**, Dalvand F, Vali M, Yousefi A, Tabatabaei MH, Amouheidari A, Abedi I. Auto-Segmentation and Classification of Glioma Tumors with the Goals of Treatment Response

Assessment Using Deep Learning Based on Magnetic Resonance Imaging. Neuroinformatics. 2023 Jul 17:1-0.

- **Fathi S**, Ahmadi A, Dehnad A, Almasi-Dooghaee M, Sadegh M. A deep learning-based ensemble method for early diagnosis of Alzheimer's disease using MRI images. Neuroinformatics. 2023
- **Fathi S**, Nematollahi M, Zamani A, Sharifian, Steganography for Medical Image Integrity Control. 6th Iranian Imaging Informatics Congress; Tehran. 2015 Aug
- **Fathi S**, Azmoonfar R, Moradi-nazar M, Hosseini A, Faramarzi H. Data mining with patient relationship management (PRM) approach in hospitals of Fars province in 2010. 2nd congress of medical students of the Tehran Collaborative Network. 2012 [In Persian]

Achievements:

- Member of the Organization for Development of Exceptional Talents, Shiraz University of Medical Sciences.
- Achieved the title of Elite Student in the Master's program in Medical Informatics in 2011 (GPA: 18.91).
- Awarded the **Best Paper** title at the 6th National Conference on Imaging Informatics in 2015.
- Ranked **fifth** in the entrance exam for the PhD program in Medical Informatics in 2015.
- Achieved **first place** in the Artificial Intelligence competition at Sharif University of Technology in 2018.
- Ranked **fourth** in the national Data Mining competition in 2018.

Courses, Workshops and Conferences:

- 2nd Research Congress of Medical Students, Tehran Collaborative Network, Tehran, 2011.
- 4th International Conference on Imaging Informatics, Shiraz, 2011.
- Workshop on electronic health journals, Mashhad, 2012.
- 5th International Conference on Imaging Informatics, Shiraz, 2013.
- 6th International Conference on Imaging Informatics, Tehran, 2015.
- Exploratory Factor Analysis Workshop, Iran University of Medical Sciences, Tehran, 2016.
- Presented in the Journal Club on "EMR Summary Creation by Natural Language Processing," 2016.
- 3rd National Health Technology Conference, Tehran, 2017.
- Solution Competition at the 3rd National Health Technology Conference, Tehran, 2017.
- 2nd Symposium on Recent Advances in Brain Mapping, Tehran, 2018.
- Participated in the Artificial Intelligence competitions at Sharif University of Technology in 2018 and 2019.
- Completed an advanced Python programming course with a focus on object-oriented thinking, with a score of **Perfect**, 2018.
- Completed a data analysis course with Python (Task-oriented course in data analysis with Python), with a score of **Perfect**, 2022.
- Completed a professional project-oriented course in machine learning with Python, with a score of **Perfect**, 2023.
- 4th Symposium on Neuroscience, Sharif University of Technology, 2022.
- Served as a reviewer for the **Engineering Applications of Artificial Intelligence** journal indexed in ISI.

- Served as a reviewer for the **International Journal of Medical Informatics** journal indexed in ISI.
- Served as a reviewer for the **Computers in Biology and Medicine** journal indexed in ISI.
- Served as a reviewer for the **Health Management journal** of Iran University of Medical Sciences.
- Served as a reviewer for the Internal Medicine Research journal of Gonabad University of Medical Sciences.

Skills:

- Proficient in the Python programming language and related libraries and concepts in machine learning, natural language processing, and data analysis, including numpy, pandas, matplotlib, seaborn, scikit-learn, h2o, etc.
- Proficient in the deep learning framework Keras and Tensorflow in Python.
- Proficient in MATLAB software for image processing and neural networks.
- Proficient in IBM SPSS Statistics for statistical analysis.
- Proficient in IBM SPSS Modeler for data mining.
- Familiar with database design concepts and working with SQL Server software.