SAYYED MOSTAFA MOSTAFAVI, PhD

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EDUCATION

- BA in Computer Science.2001-2004 Department of Computer Science, Oxford University, UK. Research focus: Biological sequence analysis, Algorithm design and performance analysis.
- MSc in Computer science (Artificial Intelligence).2005-2007 School of Computer Science, University of Manchester, UK. MSc Dissertation: Resolution-based tableaux for modal and description logics. Research focus: Artificial intelligence, Theorem proving, Formal methods
- PhD in Biomedical Computing. 2010-2016 School of Computing and Laboratory for Integrative Motor Behavior, Department of Medicine, Queen's University, Canada PhD Dissertation: Computational Models for Improved Diagnosis and Prognosis of Stroke Using Robot- Based Biomarkers
- Postdoctoral Research Fellow. 2016-2017 McGill University, Montreal, Canada

EMPLOYMENT HISTORY

• Assistant Professor, Department of Medical Informatics, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran. 2018-2022.

• Assistant Professor, Department of Computer Engineering, University of Isfahan, Iran. 2022-2024.

• Research Associate, Embedded Machine Intelligence Lab, College of Health Solutions, Arizona State University, Phoenix, AZ, USA. 2024-2025.

• Assistant Professor, Department of Computer Engineering, Amir Kabir University of Technology, Tehran, Iran. 2026-pres.

PUBLICATIONS

Google Scholar profile:

Sayyed Mostafa Mostafavi
https://scholar.google.com/citations?user=M1HMY30AAAAJ&hl=en&oi=sra

JOURNAL PUBLICATIONS

1. Arefeen A, Fessler S, Mostafavi SM, Johnston CS, Ghasemzadeh H. MealMeter: Using Multimodal Sensing and Machine Learning for Automatically Estimating Nutrition Intake. arXiv preprint arXiv:2503.11683. 2025.

2. Mostafavi SM, Soumma SB, Peterson D, Mehta SH, Ghasemzadeh H. Detection and Severity Assessment of Parkinson's Disease Through Analyzing Wearable Sensor Data Using Gramian Angular Fields and Deep Convolutional Neural Networks. Sensors. 2025;25(11):3421.

3. Ataei Nakhaei S, Sadeghi R, Mostafavi SM, Treglia G, Hassanzadeh M, Esmaeilpour M, Taheri NS, Farazestanian M. Sentinel node mapping in ovarian tumors: a study using lymphoscintigraphy and SPECT/CT. Contrast media & molecular imaging. 2024;2024(1):5453692.

4. Nakhaei SA, Askari E, Mohammadzadeh H, Roustaei H, Karamian F, Mostafavi SM, Aghaei A. How did the COVID-19 pandemic affect the referral patterns for SPECT myocardial perfusion? A single center experience. Asia Oceania Journal of Nuclear Medicine and Biology. 2023;11(2):128.

5. Hosseini N, Hosseini M, Mostafavi SM, Kiani B, Bergquist R, Kimiafar K, Sarbaz M. Using Social Networks for Tele-consultation on the Covid-19 Clinical Coding: A Quality Improvement Approach for Health Policy Making. Authorea Preprints. 2023.

6. Hosseini N, Mostafavi SM, Zendehdel K, Eslami S. Factors affecting clinicians' adherence to principles of diagnosis documentation: A concept mapping approach for improved decision-making. Health Information Management Journal. 2022;51(3):149-158.

7. Firouraghi N, Mohammadi A, Hamer DH, Bergquist R, Mostafavi SM, Shamsoddini A, Raouf-Rahmati A, Fakhar M, Moghaddas E, Kiani B. Spatio-temporal visualisation of cutaneous leishmaniasis in an endemic, urban area in Iran. Acta Tropica. 2022;225:106181.

8. Kiani B, Tabari P, Mohammadi A, Mostafavi SM, Moghadami M, Amini M, Rezaianzadeh A. Spatial epidemiology of skin cancer in Iran: separating sun-exposed and non-sun-exposed parts of the body. Archives of Public Health. 2022;80(1):35.

9. Ataei-Nakhaei S, Aryana K, Mostafavi SM, Kosari HM, Esmatinia M, Aghaee A. Peptide receptor radionuclide therapy (PRRT) in radioiodine-refractory thyroid cancer: A case report of significant response to lu177 DOTA-TATE treatment. Archives of Endocrinology and Metabolism. 2022;66.0:269-271.

10. Ataei Nakhaei S, Mostafavi SM, Farazestanian M, Hassanzadeh M, Sadeghi R. Feasibility of sentinel lymph node mapping in ovarian tumors: A systematic review and meta-analysis of the literature. Frontiers in Medicine. 2022;9:950717.

11. Eslami S, Khoshrounejad F, Golmakani R, Taherzadeh Z, Tohidinezhad F, Mostafavi SM, Ganjali R. Effectiveness of IT-based interventions on self-management in adult kidney transplant recipients: a systematic review. BMC medical informatics and decision making. 2021;21(1):2.

12. Azimi A, Bagheri N, Mostafavi SM, Furst MA, Hashtarkhani S, Amin FH, Eslami S, Kiani F, VafaeiNezhad R, Akbari T. Spatial-time analysis of cardiovascular emergency medical requests: enlightening policy and practice. BMC Public Health. 2021;21(1):7.

13. Ebnehoseini Z, Tabesh H, Jangi M, Deldar K, Mostafavi SM, Tara M. Investigating evaluation frameworks for electronic health record: A literature review. Open Access Macedonian Journal of Medical Sciences. 2021;9.0:.

14. Hashemi Amin F, Ghaemi M, Mostafavi SM, Goshayeshi L, Rezaei K, Vahed M, Kiani B. A Geospatial database of gastric cancer patients and associated potential risk factors including lifestyle and air pollution. BMC Research Notes. 2021;14(1):91.

15. Samimi T, MohammadEbrahimi S, Tara F, Mostafavi SM, Ebrahimi Miandehi E, Tara M. Improving Information Adequacy of Clinical Morning Reports; Development of a Structured Model in the Obstetrics and Gynecology Department. Health Education and Health Promotion. 2021;9(3):209- 220.

16. Shakouri S, Bakhshali MA, Layegh P, Kiani B, Masoumi F, Ataei Nakhaei S, Mostafavi SM. COVID19- CT-dataset: an open-access chest CT image repository of 1000+ patients with confirmed COVID-19 diagnosis. BMC research notes. 2021;14(1):178.

17. Hosseini N, Kimiafar K, Mostafavi SM, Kiani B, Zendehdel K, Zareiyan A, Eslami S. Factors affecting the quality of diagnosis coding data with a triangulation view: A qualitative study. The International Journal of Health Planning and Management. 2021;36(5):1666-1684.

18. Jangi M, Ghasemi SH, Sabbagh MG, Tabesh H, Mostafavi SM, Tara M. Development and evaluation of a new tool for multiple criteria decision making. International Journal of Multicriteria Decision Making. 2021;8(4):313-330.

19. Aalaei S, Rezaeitalab F, Tabesh H, Amini M, Afsharisaleh L, Mostafavi SM, Asadpour H, Eslami S. Factors affecting patients' adherence to continuous positive airway pressure therapy for obstructive sleep apnea disorder: a multi-method approach. Iranian Journal of Medical Sciences. 2020;45(3):170.

20. Ganjali R, Taherzadeh Z, Sabbagh MG, Nazemiyan F, Mamdouhi F, Tabesh H, Aval SB, Golmakani R, Mostafavi SM, Eslami S. Effect of an interactive voice response system on self-management in kidney transplant recipients: protocol for a randomized controlled trial. Medicine. 2019;98(6):e14291.

21. Ebnehoseini Z, Tabesh H, Deldar K, Mostafavi SM, Tara M. Determining the hospital information system (HIS) success rate: development of a new instrument and case study. Open access Macedonian journal of medical sciences. 2019;7(9):1407.

22. Ganjali R, Khoshrounejad F, Mazaheri Habibi MR, Taherzadeh Z, Golmakani R, Mostafavi SM, Eslami S. Effect and features of information technology-based interventions on self-management in adolescent and young adult kidney transplant recipients: a systematic review. Adolescent Health, Medicine and Therapeutics. 2019:173-190.

23. Mostafavi SM, Scott S, Dukelow S, Mousavi P. Reduction of assessment time for stroke-related impairments using robotic evaluation. IEEE Transactions on Neural Systems and Rehabilitation Engineering. 2017;25(7):945-955.

24. Mostafavi SM. Computational models for improved diagnosis and prognosis of stroke using robot- based biomarkers. 2016.

25. Mostafavi SM, Mousavi P, Dukelow SP, Scott SH. Robot-based assessment of motor and proprioceptive function identifies biomarkers for prediction of functional independence measures. Journal of neuroengineering and rehabilitation. 2015;12(1):105. Conference publications

1. Soumma SB, Alam S, Rahman R, Mahi UN, Mamun A, Mostafavi SM, Ghasemzadeh H. Freezing of gait detection using gramian angular fields and federated learning from wearable sensors. arXiv preprint arXiv:2411.11764. 2024.

2. Mostafavi SM, Dukelow S, Scott S, Mousavi P. Evaluation of similarities between robotic tasks for reduction of stroke assessment time. 2015 IEEE International Conference on Rehabilitation Robotics (ICORR). 2015:211-216.

3. Mostafavi SM, Dukelow SP, Scott SH, Mousavi P. Hierarchical task ordering for time reduction on KINARM assessment protocol. 2014 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. 2014:2517-2520.

4. Mostafavi SM, Dukelow SP, Glasgow JI, Scott SH, Mousavi P. Reduction of stroke assessment time for visually guided reaching task on KINARM exoskeleton robot. 2014 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. 2014:5296-5299.

5. Mostafavi SM, Glasgow JI, Dukelow SP, Scott SH, Mousavi P. Prediction of stroke-related diagnostic and prognostic measures using robot-based evaluation. 2013 IEEE 13th International Conference on Rehabilitation Robotics (ICORR). 2013:.

CONFERENCE PUBLICATIONS

1. Soumma SB, Alam S, Rahman R, Mahi UN, Mamun A, Mostafavi SM, Ghasemzadeh H. Freezing of gait detection using gramian angular fields and federated learning from wearable sensors. arXiv preprint arXiv:2411.11764. 2024.
2. Mostafavi SM, Dukelow S, Scott S, Mousavi P. Evaluation of similarities between robotic tasks for reduction of stroke assessment time. 2015 IEEE International Conference on Rehabilitation Robotics (ICORR). 2015:211-216.
3. 3. Mostafavi SM, Dukelow SP, Scott SH, Mousavi P. Hierarchical task ordering for time reduction on KINARM assessment protocol. 2014 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. 2014:2517-2520.

4. 4. Mostafavi SM, Dukelow SP, Glasgow JI, Scott SH, Mousavi P. Reduction of stroke assessment time for visually guided reaching task on KINARM exoskeleton robot. 2014 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. 2014:5296-5299.
5. 5. Mostafavi SM, Glasgow JI, Dukelow SP, Scott SH, Mousavi P. Prediction of stroke-related diagnostic and prognostic measures using robot-based evaluation. 2013 IEEE 13th International Conference on Rehabilitation Robotics (ICORR). 2013:2025-01-06 00:00:00.

STUDENT SUPERVISION

• Shokouh Shakouri, MSc Student. 2020-2022. Thesis title: Automatic diagnosis and quantification of COVID-19 infections on Chest CT images using deep convolutional neural networks.

• Farid Masoumi, MSc student. 2021-2023 Thesis title: Identification of gait biomarkers in neurodegenerative disorders using signal processing and machine learning models.

• Amir Sharifian, BSc student. 2023-2024 Thesis title: Symmetry identification in dermoscopic skin lesion images using deep convolutional neural networks.

AWARDS AND HONORS

- R. Samuel McLaughlin Fellowship, Queen's University. 2011-2012. $12,000
- Queen's Graduate Award. 2009-2011. $15,000
- CIHR McGill Postdoctoral Fellowship Award. 2016-2017. $40,000

SCIENTIFIC PRESENTATIONS

- Podium Presentation, IEEE International Conference on Rehabilitation Robotics (ICORR), Singapore, August 2015.
- Podium Presentation, IEEE Conference on Engineering in Medicine and Biology (EMBS), Chicago, USA, August 2014.
- Poster Presentation, IEEE Conference on Engineering in Medicine and Biology (EMBS), Chicago, USA, August 2014.
- Poster Presentation, IEEE International Conference on Rehabilitation Robotics (ICORR), Seattle, WA, June 2013.

SCIENTIFIC REVIEWS

- IEEE International Conference on Rehabilitation Robotics (ICORR), Singapore.
- IEEE Conference on Engineering in Medicine and Biology (EMBS), Chicago.
- Experimental Brain Research
- Pattern Recognition

GRADUATE COURSES

- Machine Learning
- Neural Networks
- Computational Biology
- Automated Reasoning
- Knowledge Representation and Reasoning
- High Performance Computing in Science
- Fuzzy Theory and Fuzzy Algorithms
- Programming Languages Theory
- Algorithms and Machine Learning Methods for Computational Biology
- Pattern Recognition (audit)

TEACHING EXPERIENCE

- Artificial Intelligence
- Scientific Methods for Computing
- Algorithm Design
- Discrete Mathematics for Computing
- Data Structures
- Operating Systems
- Programming and Machine Languages Theory
- Machine Learning