



General Information

Full Name	Hossein Nematzadeh Balagatabi		
LinkedIn	https://www.linkedin.com/in/hossein-nematzadeh-015113230/		
Google Scholar	https://scholar.google.com/citations?user=e4hEmVEAAAAAJ&hl=en		
GitHub	https://github.com/hnematzadeh		
ORCID ID	0000-0002-6161-0430		
Scopus ID	49864283200		
Web of Science ID	AAN-6023-2021		
Contact Emails	hnematadeh@uma.es	hossein.nematzadeh@iau.ac.ir	hn_61@yahoo.com

Professional Experience

Position	Organization	Country	Duration
Research Associate	Universidad de Malaga	Spain	Jul 2021 - present
Assistant Professor	Islamic Azad University	Iran	Sep 2012 - Jul 2021
Invited Professor	Kavosh University	Iran	Jan 2018 - Jul 2021
Invited Professor	Marlik University	Iran	Sep 2018 - Sep 2020
Invited Professor	Allameh Mohades Nouri University	Iran	Sep 2017 - Sep 2019
Invited Professor	Allameh Tabarsi University	Iran	Sep 2015 - Sep 2018
Invited Professor	Mazandaran University of Science and Technology	Iran	Sep 2016 - Feb 2017
Invited Professor	University College of Rouzbahan	Iran	Sep 2014 - Sep 2016
Invited Professor	Tabari University	Iran	Sep 2012 - Sep 2015

Education

Degree	Major	University	Duration
Ph. D.	Computer Science	Universiti Teknologi Malaysia	Dec 2008 - May 2014
Master	Computer Science	Universiti Teknologi Malaysia	Jun 2007 - Jan 2009
Bachelor	Computer Engineering - Software	Mazandaran University of Science and Technology	Sep 2001 - May 2007

	Research Interests	
Domain of interest		Specialty
Machine Learning & Data Analytics*	Feature selection – Noise and outlier detection – Training set selection – Explainable Artificial Intelligence (XAI)	
Cryptography	Image Encryption	
Software Engineering	Verification and Validation (V&V) by formal methods	

* As a Data Scientist, I can work with *R* and *Python* along with SQL Server. Briefly, my abilities (with respective platforms) are as follows:

1) Regression analysis with *R platform*:

1. Linear Regression Estimation
2. Hypothesis Testing
3. Multicollinearity
4. Analysis Stepwise Regression
5. Outlier Detection
6. Logistic Regression
7. Multinomial Regression
8. Poisson Regression

2) Classification & Clustering with *Python platform*:

1. Principle Component Analysis (PCA)
2. Naive Bayes
3. Linear Discriminant Analysis
4. Quadratic Discriminant Analysis
5. K Nearest Neighbors
6. Decision Tree
7. Bagging, Random Forest , Boosting
8. Support Vector Machine
9. Ridge, Lasso, and Elastic Nets
10. Deep Learning (VNN & CNN)
11. Kmeans - Hierarchical clustering
12. Time Series

Software and Technologies

MATLAB, Python, R, SQL Server, C & C#, Java, Pascal, Docker, Prometheus, Grafana, Linux

Teaching Experience

<i>PhD</i>	
<i>Course</i>	<i>Credit</i>
<i>Intelligent Algorithms</i>	3
<i>Intelligent Planning</i>	3
<i>Decision Support Systems</i>	3
<i>Neural Networks</i>	3
<i>Expert Systems</i>	3
<i>Distributed Systems</i>	3
<i>Advanced Operating systems</i>	3
<i>Topics in Artificial Intelligence</i>	3
<i>Master</i>	
<i>Course</i>	<i>Credit</i>
<i>Expert Systems & Knowledge Engineering</i>	3
<i>Decision Support Systems</i>	2
<i>Data Mining</i>	3
<i>Advanced Artificial Intelligence</i>	4
<i>Advanced Operating Systems</i>	4
<i>Advanced Software Engineering</i>	3
<i>Knowledge Base Systems</i>	3
<i>Design of Safe Software</i>	3
<i>Bachelor</i>	
<i>Course</i>	<i>Credit</i>
<i>Computer Programming</i>	2
<i>Artificial Intelligence</i>	3
<i>Human-Computer Interaction</i>	3
<i>Expert Systems</i>	3
<i>Expert Systems & Decision Support Systems</i>	3
<i>Database</i>	3

The evidence for merits and teaching experience will be sent in the form of officially sworn translation documents upon request.

JCR publications

1. Sadegh Asghari, **Hossein Nematzadeh**, Ebrahim Akbari, Homayun Motameni, “Mutual information-based filter hybrid feature selection method for medical datasets using feature clustering”, *Multimedia Tools Appl.* April 2023 Q2
2. Zohre Sadeghian, Ebrahim Akbari, **Hossein Nematzadeh**, Homayun Motameni, “A review of feature selection methods based on meta-heuristic algorithms”, *Journal of Experimental & Theoretical Artificial Intelligence*, February 2023, Pages 1-51 Q3
3. **Hossein Nematzadeh**, Jose Garcia-Nieto, Ismael Navas-Delgado, Jose.F Aldana-Montes, “Ensemble-based genetic algorithm explainer with automated image segmentation: A case study on melanoma detection dataset”, *Computers in Biology and Medicine*, Volume 155, March 2023, Pages 1-16 Q1
4. **Hossein Nematzadeh**, José García-Nieto, Ismael Navas-Delgado, José F.Aldana-Montes, “Automatic frequency-based feature selection using discrete weighted evolution strategy”, *Applied Soft Computing*, Volume 130, November 2022, Pages 1-13 Q1
5. Sedighe Abasabadi, **Hossein Nematzadeh**, Homayun Motameni, Ebrahim Akbari, “Hybrid feature selection based on SLI and genetic algorithm for microarray datasets”, *The Journal of Supercomputing*, Volume 78, June 2022, Pages 19725-19753 Q2
6. Sedighe Abasabadi, **Hossein Nematzadeh**, Homayun Motameni, Ebrahim Akbari, “Automatic ensemble feature selection using fast non-dominated sorting”, *Information Systems*, Volume 100, March 2021, Pages 1-14 Q2
7. Zohre Sadeghian, Ebrahim Akbari, **Hossein Nematzadeh**, “A hybrid feature selection method based on information theory and binary butterfly optimization algorithm”, *Engineering Application of Artificial Intelligence*, Volume 97, January 2021, Pages 1-13 Q1
8. Mahsa Rahimi Resketi, Homayun Motameni, **Hossein Nematzadeh**, Ebrahim Akbari, “Automatic summarising of user stories in order to be reused in future similar projects”, *IET Software*, December 2020, Volume 14, Issue 20, Pages 711-723 Q4
9. Maryam Samami, Ebrahim Akbari, Moloud Abdar, Pawel Plawiak, **Hossein Nematzadeh**, Mohammad Ehsan Basiri, Vladimir Makarenkov, “A mixed solution-based high agreement filtering method for class noise detection in binary classification”, *Physica A: Statistical Mechanics and its Applications*, Volume 553, 1 September 2020, Pages 1-28 Q2

10. Mehdi Yadollahi, Rasul Enayatifar, **Hossein Nematzadeh**, Malrey Lee, Jae-Young Choi, “A novel image security technique based on nucleic acid concepts”, *Journal of Information Security and Applications*, Volume 53, August 2020, Pages 1-11 Q2
11. Mehdi Alirezanejad, Rasul Enayatifar, Homayun Motameni, **Hossein Nematzadeh**, “Heuristic filter feature selection methods for medical datasets”, *Genomics*, Volume 112, Issue 2, March 2020, Pages 1171-1183 Q2
12. Mehdi Alirezanejad, Rasul Enayatifar, Homayun Motameni, **Hossein Nematzadeh**, “GSA-LA: gravitational search algorithm based on learning automata”, *Journal of Experimental & Theoretical Artificial Intelligence*, February 2020, Pages 109-125 Q3
13. **Hossein Nematzadeh**, Rasul Enayatifar, Mehdi Yadollahi, Malrey Lee, Gisong Jeong,” Binary search tree image encryption with DNA”, *Optik*, Volume 202, February 2020, Pages 1-10 Q2
14. **Hossein Nematzadeh**, Rasul Enayatifar, Maqsood Mahmud, Ebrahim Akbari, “Frequency based feature selection method using whale algorithm”, *Genomics*, 2019, Volume 111, Issue 6, December 2019, Pages 1946-1955 Q2
15. Fatemeh Nazerian, Homayun Motameni, **Hossein Nematzadeh**, “Emergency role-based access control (E-RBAC) and analysis of model specifications with alloy”, *Journal of Information Security and Applications*, Volume 45, 2019, Pages 131-142 Q2
16. Fatemeh Nazerian, Homayun Motameni, **Hossein Nematzadeh**, “Secure access control in multidomain environments and formal analysis of model specifications”, *Turk J Elec Eng & Comp Sci*, Volume 26, No 5, 2018, Pages 2525 – 2540 Q3
17. **Hossein Nematzadeh**, Rasul Enayatifar, Homayun Motameni, Frederico Gadelha Guimarães, Vitor Nazário Coelho, ”Medical image encryption using a hybrid model of modified genetic algorithm and coupled map lattices”, *Optics and Lasers in Engineering*, Volume 110, November 2018, Pages 24-32 Q1

JCR under review publications:

1. **Hossein Nematzadeh**, José García-Nieto, José F.Aldana-Montes, Ismael Navas-Delgado, “Pattern recognition frequency-based feature selection with multi-objective discrete evolution strategy for high dimensional medical datasets”. *Applied Soft Computing* Q1
2. Navid Mohseni, **Hossein Nematzadeh**, Homayun Motameni, Ebrahmim Akbari,” Supervised and unsupervised dynamic training set selection” *Knowledge-Based Systems* Q1
3. Sadegh Asghari, **Hossein Nematzadeh**, Ebrahim Akbari, Homayun Motameni, ” Automatic hybrid feature selection by converting continuous to discrete data using combination of Kmeans and NMI along with DMIFS”, *The Journal of Supercomputing* Q2

Non-JCR publications (Partial list)

1. Mahsa Rahimi Resketi, Homayun Motameni, Ebrahim Akbari, **Hossein Nematzadeh**, “Tag recommendation in social networks with the help of optimized text summarization and fuzification”, *Journal of Applied Dynamic Systems and Control*, Volume 6, No. 1, June 2023, Pages 27-36 ---
2. Navid Mohseni, **Hossein Nematzadeh**, Homayun Motameni, Ebrahmim Akbari, “Outlier detection in test samples using standard deviation and unsupervised training set selection”, *International Journal of Engineering*, Volume 36, January 2023 **SJR Q3**
3. Zohre Sadeghian, Ebrahim Akbari, **Hossein Nematzadeh**, Homayun Motameni, “A review of Feature Selection Method Based on Optimization Algorithms”, *Journal of Computer & Robotics*, December 2022 ---
4. Mahsa Rahimi Resketi, Homayun Motameni, Ebrahim Akbari, **Hossein Nematzadeh**, “A Systematic Review of the Literature in Dynamic Video Summarization”, *International Journal Multimedia and Image Processing (IJMIP)*, Volume 12, Issue 1, December 2022, Pages 519-527 ---
5. Navid Mohseni, **Hossein Nematzadeh**, Ebrahim Akbari, “Outlier detection in test samples and supervised training set selection”, *International Journal of Nonlinear Analysis and Applications*, February 2021, Volume 12, Issue 1, Pages 701-712 **SJR Q4**
6. Fatemeh Nosratan, **Hossein Nematzadeh**, Homayun Motameni, “A Technique for Improving Web Mining using Enhanced Genetic Algorithm”, *Journal of AI and Data Mining*, Volume 7, No 4, 2019, Pages 597-606 ---
7. Masoumeh Asghari, **Hossein Nematzadeh**, “Predicting air pollution in Tehran: Genetic algorithm and back propagation neural network”, *Journal of AI and Data Mining*, Volume 4, Issue 1, 2016, Page 49-54 ---
8. Masoumeh Asghari, **Hossein Nematzadeh**, “Prediction of Air Pollution in Tehran based on Evolutionary Models”, *Indian Journal of Science and Technology*, Volume 8, Issue 35, 2015, Page 1-5 ---
9. Zahra Nematzadeh Balagatabi, Roliana Ibrahim, **Hossein Nematzadeh**, “Comparison of Decision Tree Methods in Classification of Researcher’s Cognitive styles in Academic Environment”, *Jurnal Teknologi*, Volume 74, No 1, 2015, Pages 223-231 **SJR Q2**
10. **Hossein Nematzadeh**, Zahra Nematzadeh, “Deterministic measurement of reliability and performance using explicit colored petri net in business process execution language and eflow”, *International Journal of Engineering-Transactions A: Basics* 28 (10), 2015, Pages 1439-1446 **SJR Q3**
11. **Hossein Nematzadeh**, Homayun Motameni, Radziah Mohamad, Zahra Nematzadeh, “QoS Measurement of Workflow-Based Web Service Compositions Using Colored Petri Net”, *The Scientific World Journal*, July 2014, Pages 1-14 **SJR Q2**

12. Hamidreza Hasannejad, Hodayun Motameni, **Hossein Nematzadeh**, “Selection of Appropriate Software Architecture Style with Square Spline in Style based Systems”, *Indian Journal of Science and Technology*, Volume 7, Issue 6, 2014 , Page 804-808 ---

Selected Conferences (Partial list)

1. Sandro Hurtado, **Hossein Nematzadeh**, Jose Garcia-Nieto, Miguel-Angel Berciano-Guerrero, Ismael Navas-Delgado, “ On the Use of Explainable Artificial Intelligence for the Differential Diagnosis of Pigmented Skin Lesions” , International Work-Conference on Bioinformatics and Biomedical Engineering, pp 319–329. Gran Canaria. Spain. 27th-30th June. 2022
2. Hodayun Motameni, Tara Ghassempouri, **Hossein Nematzadeh**, “Evaluating the reliability of Communication diagram using Fuzzy Petri net”, International Conference on Recent Trends in Computer and Information Engineering, (ICRTCIE'2012), April, 13-15, Pattaya, Thailand, 2012
3. Hodayun Motameni, A.Golpur, **Hossein Nematzadeh**, “Designing and Analysis of Mobile Agent in Network Management Using Petri Net”, 3rd International Conference on Machine Learning and Computing (ICMLC), Singapore, 2011
4. **Hossein Nematzadeh**, Radziah Mohamad , Hodayun Motameni, “Transforming Polymorphic Process Model to Petri Net: A Formal Way for Validating Workflow-Based Web Service Composition” 2nd International Conference on Software Engineering and Service Science, (ICSESS), IEEE, Beijing, China, 2011
5. **Hossein Nematzadeh**, Radziah Mohamad ,”Towards Validation of E-Services Composition: Transforming eFlow to Petri-Nets” In the Proceedings of the International Conference on Software Engineering Research and Practice (SERP'10). Las Vegas, Nevada, USA, June 2010
6. **Hossein Nematzadeh**, Radziah Mohamad, “Towards Evaluation of Service Oriented Architecture Using Petri Net Theory”, Asia-Pacific Software Engineering Conference, (APSEC), Penang, Malaysia, 2009
7. **Hossein Nematzadeh**, Safaai Bin Deris, Hanif Maleki, Zahra Nematzadeh ,”Evaluating Reliability of System Sequence Diagram Using Fuzzy Petri Net”, International Joint Journal Conference in Engineering, 1(1), 142-147, 2009
8. **Hossein Nematzadeh**, Safaai Bin Deris, Hanif Maleki, Zahra Nematzadeh, “Reliability Testing of UML Activity Diagram Using Fuzzy Petri Net”, World Congress on Science, Engineering and Technology, (WCSET), Rome, Italy, 2009
9. Ali Mirzaaghazadeh, Hodayun Motameni, Mehrdad Karshenas, **Hossein Nematzadeh**, “ Learning Flexible Neural Networks for Pattern Recognition”, Proc of International Conference on Computer, Information and System Science, Bangkok, Thailand, January 29-31, 2007

Research supervision

- Supervisor and co-supervisor of PhD students: **3 - 3**
- Supervisor and co-supervisor of master students: **53 – 48**

Ph.D. Main supervisorship				
Student	Title	Location	Start	End
Sedighe abasabadi	<i>Ensemble feature selection with automatic thresholding capability</i>	IAU	2016	2021
Navid Mohseni	<i>Supervised and unsupervised dynamic training set selection and outlier test detection</i>	IAU	2016	2021
Sadegh Asghari	<i>A hybrid feature selection method using normalised mutual information based on clustering</i>	IAU	2016	Onwards

Research grant

- PhD grant funded by *University of Technology, Malaysia* (2009 - 2014)
- Research grant by *Islamic Azad University – Sari Branch* on a project entitled, Structural Comparison Between BPEL and eflow to Propose a Tool for Qualitative Evaluation Based on Colored Petri Net (2015 - 2016)
- Research grant by *Islamic Azad University – Sari Branch* on a project entitled, Drawing Binary Trees within Arbitrary Polygons Based on Center of Gravity (2016 - 2017)

Startup project

- Technical advisor and a member in developing order registration telegram bot in [Radin Technology Group](#)

Membership

- Journal of Advances in Computer Research - [JACR - Editor](#)
- Reviewer of journals and Intl Conferences:
 - [Journal of Supercomputing](#)
 - [Engineering Applications of Artificial Intelligence](#)
 - [Swarm Intelligence](#)
 - [Journal of Symmetry](#)
 - [Informatics in Medicine Unlocked](#)
 - [Journal of Grid Computing](#)
 - [Applied Sciences](#)
 - [Mathematics](#)
 - [PLOS ONE](#)
 - [Journal of AI & Data Mining](#)
 - [Journal of Advances in Computer Research](#)
 - [APJITM 2016](#)
 - [SPIS 2015](#)
 - [MySEC 2014](#)

Responsibilities

- Head of the Department of Computer Engineering in *Islamic Azad University – Sari Branch*
(2017 - 2018)
- Head of the interview team for Computer Engineering & Computer Science PhD applicants
selection (2017 - 2019)

English Proficiency

- Academic IELTS **7** (21/FEB/2009)

References: Professional References

1. Dr. Jose Francisco Aldana Montes. Ada Byron Research Center. University of Malaga, Spain
(Postdoc Supervisor)
Contact: jfaldana@uma.es - jfam@lcc.uma.es
Phone: +34 952 132 813
2. Dr. Jose Manuel Garcia Nieto. Ada Byron Research Center. University of Malaga, Spain
(Postdoc Supervisor)
Contact: jnieto@lcc.uma.es - jnieto@uma.es
Phone: +34 951 952 924
3. Dr. Ismael Navas-Delgado. Ada Byron Research Center. University of Malaga, Spain
(Postdoc Supervisor)
Contact: ismael@uma.es
Phone: +34952 136 314
4. Dr. Radziah Mohamad. Faculty of Computing. Universiti of Teknologi Malaysia, Malaysia
(Ph. D. Supervisor)
Contact: Radziahm@utm.my - drradziah@gmail.com
Phone: +60 197 171 734
5. Dr. Rasul Enayatifar. Islamic Azad University, Firoozkooh Branch, Iran.
(Research Fellow)
Contact: r.enayatifar@iaufb.ac.ir - r.enayatifar@gmail.com
Phone: +98 938 136 7815
6. Dr. Ebrahim Akbari. Head of the Department of Computer Engineering. Islamic Azad University, Sari Branch, Iran.
(Research Fellow)
Contact: akbari@iausari.ac.ir - ebrahimakbari30@yahoo.com
Phone: +98 911 313 5653

References: Personal References

1. Dr. Abbas Madraky. Chair of the Department of Computer Science at Kavosh Institute of Higher Education, Mahmoodabad, Iran.

(Colleague)

Contact: madraky@yahoo.com

Phone: +98 911 325 4095

2. Dr. Mazdak Zamani. Associate Dean Computer Science & Associate Professor of Cybersecurity. Felician University, Unites States of America

(University-mate during Ph. D.)

Contact: ZamaniM@felician.edu

Phone: +1 2015593324

The CV has been updated on **July 11th, 2023**