Reza Sadeghi

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Personal Statement

Reza Sadeghi has attended the department of computer science and engineering at Wright State University as a PhD student in computer science. Right now, he is a graduate research assistant at Data Science for Healthcare lab in the Ohio Center of Excellence in Knowledge-enabled Computing (kno.e.sis). He has achieved to publish more than 13 research papers in precious journals and conferences with high impact factors. Also, he is reviewer and program committee member of top conferences and journals such as WWW conference and IEEE Transactions on Fuzzy Systems.
Through his research, he had worked on different concepts especially, probabilistic graphical model, signal processing, and soft computing techniques. Currently, he tries to create a smart personalized clinical decision support systems based on state-of-the-art machine learning methods. To address this issue, he is working on kHealth for dementia project under supervision of Dr. Tanvi Banerjee.

Work experience

Graduate Research Assistant May 2017 - May 2020
Kno.e.sis Research Center, Wright State University, Dayton, Ohio, USA
- Applying probabilistic graphical model structure learning in learning progress
- Detecting changes in behavior and activity patterns of patients with dementia by wearable
- Signal processing of vital signals of patients who stayed at CCU
- Using soft computing techniques for anomaly detection with focus on mortality and readmission prediction

Software Developer Nov 2013 – Mar 2017
International Imam Reza University, Department of Computer and Information Technology, Mashhad, Iran
- Customer Prediction in Furniture store based on Artificial Neural Network
- Feature Reduction and Selection based on Fuzzy Rough Set
- Handwriting detection based on Hidden Markov Model
- Heart problem diagnosis via Fourier transform signal processing
- Nurse scheduling based on Stochastic Programming

Teaching Graduate Assistant Sep 2014 - May 2015
International Imam Reza University, Department of Computer and Information Technology, Mashhad, Iran
- The applications of fuzzy logic by MATLAB Fuzzy toolbox in "Advanced mathematics in computer engineering"
- Creating dynamic website using HTML 5, CSS, and Java Script in "Multimedia systems"
- Basic concepts of C and C++ programming in "Advanced Computer programming" and "Computer programming"

Executive management and computer trainer Sep 2011-Aug 2016
Soheil Education Complex, Tehran, Iran
- Organization of student information
- Training multimedia creation by Microsoft Power Point and Autoplay software

Project Engineer Feb 2012-June 2012
IUT High school, Isfahan, Iran
- Designing & implementation of online library management website
- Advisor: Dr. Maryam Zekri

Web Developer Jun 2012-Mar 2012
Soheil Education Complex, Tehran, Iran
- Designing and implementation based on ASP.NET

Education

Ph. D., Computer Science (GPA:4.0) May 2017 - May 2020
Wright State University, Department of Computer Science and Engineering, Dayton, Ohio, USA
Advisor: Dr. Tanvi Banerjee
Thesis: Personalized clinical decision support systems based on probabilistic graphical model

M.S., Computer Engineering- Software (GPA:4.0) Sep 2013 - May 2015
International Imam Reza University, Department of Computer and Information Technology, Mashhad, Iran
Thesis: Strengthening Support Vector Classifiers against Outliers by using Fuzzy Rough Set and Evolutionary Methods

B.S., Computer Engineering- Software Sep 2008 - Sep 2012
Isfahan University of Technology , Department of Electrical and Computer Engineering, Isfahan, Iran
Thesis: Designing & implementation of online library management website in IUT High School

Interests

Design and implementation of Expert Systems with the aim of outlier detection
Modeling complex systems using probabilistic graphical models, deep learning, and Fuzzy Logic
Personalized clinical decision support systems based on state-of-the-art machine learning methods
Solving NP-hard problems by Evolutionary Computation techniques, and stochastic programming

Journal Publications

- M. Zabihimayvan, **R. Sadeghi**, H. NathanRude, D. Doran (2017), "A soft computing approach for benign and malicious web robot detection", Expert Systems with Applications, 87, 129-140, November 2017. (Impact factor: 3.928)

- J. Hamidzadeh, **R. Sadeghi**, Neda Namaei (2017), "Weighted support vector data description based on chaotic bat algorithm", Applied Soft Computing, 60, 540-551, November 2017. (Impact factor: 3.541)

- J. Hamidzadeh, M. Zabihimayvan, **R. Sadeghi** (2017), "Detection of Web site visitors based on fuzzy rough sets", Soft Computing, In Press. (Impact factor: 2.472)

- **R. Sadeghi**, J. Hamidzadeh (2016), "Automatic support vector data description", Soft Computing, In Press. (Impact factor: 2.472)

- A. Gholinezhad Devin, K. Abedzadeh Ghuchani, **R. Sadeghi**, H. Koosha (2015), "Dynamic Facility Location with Stochastic Demand", Shiraz Journal of System Management, 3:3, 77-90, Fall 2015.

- A. Gholinezhad Devin, K. Abedzadeh Ghuchani, **R. Sadeghi** (2013), "Stochastic Facilities location Model by Using Stochastic Programming", Shiraz Journal of System Management, 1:4, 59-71, October 2013.

Conference Publications

- **R. Sadeghi**, J. Hamidzadeh (2015), "SVDD based on Rough fuzzy set", 20th National Conference of Iranian computer committee (CSICC2015), March 3, 2015 (In Persian).

- **R. Sadeghi**, A. Shaeen, H. Abbasi, J. Hamidzadeh (2014) ,"Inducing intuitionistic fuzzy decision tree based on maximum ambiguity in big data", Second International Conference on Intelligent Information Networks and Complex Systems (IINCS2014), November 26, 2014 (In Persian).

- J. Arefi, J. Hamidzadeh, A. Gholinezhad Devin, **R. Sadeghi**, S. Fayaz (2014), "Balancing time, cost, quality and network resources by considering time value of money and extended Fuzzy Logic", Fourteenth Iranian Conference on Fuzzy Systems (ICFS2014), August 19, 2014 (In Persian).

- **R. Sadeghi**, A. Shaeen, M. Vafaijahan (2014), "Improving fast Distance Vector convergence Protocol using enhanced Hidden Markov Model", First National Conference on Computer Engineering and Information Technology Management (CEITM2014), May 29, 2014 (In Persian).

- J. Hamidzadeh, A. Shaeen, **R. Sadeghi** (2014), "Using Fuzzy Logic to Solving Worm Hole Attack", First National Conference on Computer Engineering and Information Technology Management (CEITM2014), May 29, 2014 (In Persian).

- A. Gholinezhad Devin, **R. Sadeghi**, M. Hasan Nejat, J. Hamidzadeh (2014), "Project scheduling with resource constraints using fuzzy model extension", Seventh International conference of Iranian Operations Research Society (OR2014), May 14, 2014 (In Persian).

- A. Gholinezhad Devin, K. Abedzadeh Ghuchani, **R. Sadeghi**, J. Hamidzadeh (2014), "Dynamic Stochastic facility location using random scheduling", Seventh International conference of Iranian Operations Research Society (OR2014), May 14, 2014 (In Persian).

- V. Fazelinia, A. Ebrahimi Moghaddam, **R. Sadeghi**, J. Hamidzadeh (2014),"Robot routing with hybrid fuzzy logic and HMM", First National Conference on ECSS (Moj 2014), May 10, 2014 (In Persian).

Leadership and Service Activities

- The program committee of Web Conference 2018 (WWW 2018)
- The referee of IEEE Transactions on Fuzzy Systems (Feb 2018- Present)
- Academic outreach coordinator of Biomedical Research and Technology Association (Feb 2018- Present)

Technical Strengths

Database: PostgreSQL, Oracle, Microsoft SQL Server, Microsoft Access
Programming language: R, MATLAB, Octave, HTML, CSS, C#, C, C++, JavaScript, Python, ASP.NET
Software: Visual Studio, Eclipse, VMware, VM VirtualBox, SPSS, Bayesia, Protégé, MS Office, Weka
Packages: bnlearn, RPostgreSQL, Scikit-learn, igraph, network

Honors and Awards

- Top researcher of 2016 at Imam Reza International University
- Best paper award for publishing two papers "Detection of Web site visitors based on fuzzy rough sets" and "Automatic support vector data description".

Certifications

Seminar on Artificial Intelligence & Virtual Reality with Bayesian Networks & BayesiaLab — Feb 2018- Present
Bayesia, License CREDLY-14502538

Probabilistic Graphical Models 1: Representation (with Honors) — Sep 2017- Present
Stanford University on Coursera, License 93VRVV253F72

Course Completion in Biomedical Research Investigators — Jun 2017-Jun 2020
Collaborative Institutional Training (CITI), Record ID 23266575

Course Completion in Data or Specimens Only Research — Jun 2017-Jun 2020
Collaborative Institutional Training (CITI), Record ID 23266577

Course Completion in Responsible Conduct of Research for Biomedical — Jun 2017-Jun 2020
Collaborative Institutional Training (CITI), Record ID 23266576

Internet searching methodologies & Referencing techniques by Zotero — Dec 2014 - Present
Research Management at Imam Reza International University, License 16793

References

1. Dr. Tanvi Banerjee
   Assistant Professor, Department of Computer Science and Engineering
   Wright State University, 3640 Colonel Glenn Hwy, Dayton, OH 45435
   tanvi.banerjee@wright.edu

2. Dr. Derek Doran
Assistant Professor, Department of Computer Science and Engineering
Wright State University, 3640 Colonel Glenn Hwy, Dayton, OH 45435
derek.doran@wright.edu