

Seyed Abolghasem Mirroshandel

Computer Eng. Department, University of Guilan
Rasht

CONTACT INFORMATION

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CURRENT

Associate Professor (November 2018-Now)

Department of Computer Engineering,
Faculty of Engineering, University of Guilan
Rasht

Assistant Professor (October 2012-November 2018)

Department of Computer Engineering,
Faculty of Engineering, University of Guilan
Rasht

RESEARCH INTERESTS

Dedicated to artificial intelligence and its adventures with special interests in:

- Natural Language Processing
- Machine Learning
- Data Mining
- Medical Machine Learning
- Semantic Web
- Image Processing
- Fuzzy Logic

EDUCATION

Aix-Marseille University, Marseille, France

Second Ph.D. in Computer Engineering (Sept. 2012-Dec. 2015)

Major in Computer Science

Under Supervision of Dr. Alexis Nasr

Defended by Excellent Rank

Sharif University of Technology, Tehran

First Ph.D. in Computer Engineering (Sept. 2007-Sept. 2012)

Major in Artificial Intelligence

Under Supervision of Dr. Gholamreza Ghassem-Sani

GPA: 18.08/20

- Ranked **first** among the entire university computer engineering students.

Sharif University of Technology, Tehran

M.Sc. in Computer Engineering (Sept. 2005-Sept. 2007)

Major in Artificial Intelligence

Under Supervision of Dr. Gholamreza Ghassem-Sani

GPA: 18.88/20

- Ranked **first** among the entire university computer engineering students in Semesters two, three and four.
- Ranked **first** among the entire university computer engineering students.

Relevant Course Work (all with grades A+ or A): *Artificial Intelligence Planning, Image Processing, Neural Networks, Natural Language Processing, Machine Learning, Evolutionary Computing, Speech Recognition, Semantic Web, Data Mining, Mobile Computing, M.Sc. Thesis.*

University of Tehran, Tehran

B.Sc. in Computer Engineering (Sept. 2001-June 2005)

Major in Software Engineering

GPA: 16.65/20

- Ranked **second** among the entire university computer engineering students in year 2004
- Ranked **third** among the entire university computer engineering students in year 2003.
- Ranked **forth** among the entire university computer engineering students.

Relevant Course Work (all with grades A+ or A) : *Advanced Programming, Assembly Language, Data Structure, Advanced Algorithm Design, Compilers Theory and Design, Computer Architecture, File Structure, Internet Engineering, Management Information Systems, Design of Programming Languages, Software*

Engineering, Artificial Intelligence,

Shariati High school, Rudsar, Guilan

Diploma in Mathematics and Physics (1997-2001)

GPA: 19.81/20.0

- Ranked **first** among all high school students in all years.

PUBLICATIONS

Books:

B3. **Mirroshandel, S. A.** “Opinion Mining”. Persian and Computer Book, Samt publication (In Persian): To be published on Jan. 2021 (**Book Chapter**)

B2. **Mirroshandel, S. A.**, and Ghasemian F. “Automated Morphology Detection from Human Sperm Images”. Intracytoplasmic Sperm Injection Book, Springer: Jan. 2018 (**Book Chapter**)

B1. **Mirroshandel, S. A.** “Basics of Compiler design”. First Edition. Ostadi Publication, 2011. (In Persian)

Journal Papers:

J29. Bakhshinejad, M. and **Mirroshandel, S. A.** Real-time application of swarm and evolutionary algorithms for line follower automated guided vehicles: a comprehensive study. *Evolutionary Intelligence*, 2020.

J28. Dorry, B., **Mirroshandel, S. A.**, and Esmailpour, A., Investigation of game players’ strategies using visualization techniques and data mining. *SaaIran Journal*, 2020.

J27. Mehrabi, S., **Mirroshandel, S. A.**, Ahmadifar, H., DeepSumm: A Novel Deep Learning-Based Multi-Lingual Multi-Documents Summarization System. *journal of information systems and telecommunication*, 2020.

J26. Javadi, S., Safa, R., Azizi, M., and **Mirroshandel, S. A.** A Recommendation System for Finding Experts in Online Scientific Communities. *Journal of AI and Data Mining*. 2020.

- J25. Darbandi, A. and **Mirroshandel, S. A.**, A Novel Rubik's Cube Problem Solver by Combining Group Theory and Genetic Algorithm. SN Computer Science 1.1, 2020.
- J24. Javadi, S. and **Mirroshandel, S. A.** A novel deep learning method for automatic assessment of human sperm images. Computers in biology and medicine, Apr. 2019. <https://doi.org/10.1016/j.combiomed.2019.04.030>.
- J23. Ahangi, A., Langroudi, A. F., Yazdanpanah, F., and **Mirroshandel, S. A.** "A novel fusion mixture of active experts algorithm for traffic signs recognition". Multimedia Tools and Applications, Feb. 2019. <https://doi.org/10.1007/s11042-019-7391-0>.
- J22. Maanijou, R. and **Mirroshandel, S. A.** "Introducing an expert system for prediction of soccer player ranking using ensemble learning". Neural Computing and Applications, Jan. 2019. <https://doi.org/10.1007/s00521-019-04036-9>
- J21. Aliniya, Z. and **Mirroshandel, S. A.** "A novel combinatorial merge-split approach for automatic clustering using imperialist competitive algorithm". Journal of Expert Systems with Applications: Sep. 2018. <https://doi.org/10.1016/j.eswa.2018.09.050>
- J20. Bakhshinejad, M. and **Mirroshandel, S. A.** "Harmony search path detection for vision based automated guided vehicle". Journal of Robotics and Autonomous Systems: Jun. 2018. <https://doi.org/10.1016/j.robot.2018.06.008>
- J19. Safa, R., **Mirroshandel, S. A.**, Javadi, S., and Azizi, M., "Publication Venue Recommendation Based on Paper Title and Co-authors Network Journal of Information Systems & Telecommunication: 33--40, Jun. 2018.
- J18. Mazaheri, E. and **Mirroshandel, S. A.** "Using Social Networks to Improve Customer Relationship Management". The CSI Journal on Computing Science and Information Technology 16(1): Aug. 2018 (In Persian).
- J17. Boreshban, Y., Yousefinasab, H., and **Mirroshandel, S. A.** "Providing a religious corpus of Question Answering System in Persian". Journal of Signal and Data Processing: Apr. 2018. (In Persian)
- J16. Kazemi, Y., **Mirroshandel, S. A.** "A novel method for predicting kidney stone type using ensemble learning". Artificial intelligence in medicine: Dec. 2017. <https://doi.org/10.1016/j.artmed.2017.12.001>

- J15. Ghasemian, M., **Mirroshandel, S. A.** and Zahiri, Z. "Impact of hormonal changes on the semen quality and assisted reproductive outcomes in infertile men". *Journal of Applied Biomedicine* 15(3): July 2017. <https://doi.org/10.1016/j.jab.2017.04.003>
- J14. Maanijou, R., **Mirroshandel, S. A.** "Degarbayan: Developing a Persian Paraphrase Corpus by Crowd Sourcing". *The CSI Journal on Computing Science and Information Technology* 15(1): Aug. 2017 (In Persian).
- J13. Mehrabi, Sh., **Mirroshandel, S. A.** and Ahmadifar, H. R. "Persian Multi-Documents Summarization by Deep Learning". *The CSI Journal on Computing Science and Information Technology* 14(2): May 2017 (In Persian).
- J12. Shabani, M., **Mirroshandel, S. A.** and Asheri, H. "Selective Refining Harmony Search: A New Optimization Algorithm". *Journal of Expert Systems with Applications*: Apr. 2017. <http://dx.doi.org/10.1016/j.eswa.2017.03.044>
- J11. Boreshban, Y. and **Mirroshandel, S. A.** "A novel question answering system for religious domain in Persian". *Journal of Electrical Industries* 8(2): Aug. 2017.
- J10. **Mirroshandel, S. A.**, Ghasemian, F., and Monji-Azad, S. "Applying data mining techniques for increasing implantation rate by selecting best sperms for intra-cytoplasmic sperm injection treatment". *Journal of Computer methods and programs in biomedicine* 137(1): 215--229, Dec. 2016. <http://dx.doi.org/10.1016/j.cmpb.2016.09.013>.
- J9. **Mirroshandel, S. A.** and Nasr, A. "Integrating Selectional Constraints and Subcategorization Frames in a Dependency Parser". *Computational Linguistics Journal* 42(1): 55--90, Feb. 2016. http://dx.doi.org/10.1162/COLI_a_00242.
- J8. Ghasemian, F., **Mirroshandel, S. A.**, Monji-Azad, S., Azarnia, M., and Zahiri, Z. "An Efficient Method for Automatic Morphological Abnormality Detection from Human Sperm Images". *Journal of Computer methods and programs in biomedicine* 122(3): 409--420, Dec. 2015. <http://dx.doi.org/10.1016/j.cmpb.2015.08.013>.
- J7. Khalatbari, S. and **Mirroshandel, S. A.** "Automatic Construction of Domain Ontology Using Wikipedia and Enhancing it by Google Search Engine". *Journal of Information Systems & Telecommunication* 3(4): 248--258, Dec. 2015.
- J6. Nazari Soleimandarabi, M. and **Mirroshandel, S. A.** "A Novel Approach for Computing Semantic Relatedness of Geographic Terms". *Indian Journal of Science and Technology* 8(27): 1--11, Oct. 2015. DOI:10.17485/ijst/2015/v8i27/60811.

J5. Ebrahimi, M., **Mirroshandel, S. A.**, and Aghaei, J. A. “The integrity of crime data set to improve the performance of data mining techniques to predict and detect crime”. *Journal of Electrical Industries* 6(4): 5--12, Oct. 2015.

J4. Moradmard, A., **Mirroshandel, S. A.**, and Tahghighi, M. “A Novel Method for color Image Encryption Based On Hill algorithm and Magic Cube Rotation”. *Journal of Electrical Industries* 5(4): 63--72, Oct. 2014.

J3. **Mirroshandel, S. A.** and Ghassem-Sani, G. R. “Towards Unsupervised Learning of Temporal Relations between Events”. *Journal of Artificial Intelligence Research (JAIR)*, 2012, Volume 45, 125-163, DOI: 10.1613/jair.3693.

J2. **Mirroshandel, S. A.**, Khayyamian, M., and Ghassem-Sani, G. R. “Syntactic Tree Kernels for Event-Time Temporal Relation Learning”. *Human Language Technology. Challenges for Computer Science and Linguistics, Lecture Notes in Computer Science*, 2011, Volume 6562/2011, 213-223, DOI: 10.1007/978-3-642-20095-3_20.

J1. **Mirroshandel, S. A.**, Ghassem-Sani, G. R., and Khayyamian, M. “Using Syntactic Feature based Kernels for Classifying Temporal Relations”. *Journal of Computer Science and Technology* 26(1): 68--80 Jan. 2011. DOI: 10.1007/s11390-011-1112-0.

Conference Papers:

C35. Mojrian, M. and **Mirroshandel, S. A.** “Applying Genetic Algorithm in Automatic Text Summarization”. *Proceedings of the 23rd Annual Int. CSI Computer Conference (CSICC'2018)*, Tehran, Iran, March 2018.

C34. Ghahramani far, A. and **Mirroshandel, S. A.** “Keyword Extraction Combining Clustering and LDA”. *Proceedings of the 23rd Annual Int. CSI Computer Conference (CSICC'2018)*, Tehran, Iran, March 2018.

C33. Moharrami, N. and **Mirroshandel, S. A.** “A new method for E-Banking Customers Clustering”. *Proceedings of the 3rd International Conference of Pattern Recognition and Image Analysis (IPRIA 2017)*, ShahrKord, Iran, April 2017.

- C32. Torabi, H., **Mirroshandel, S. A.**, and Ahmadifar, H. “Text Summarization Using a Graph Clustering-based Architecture”. Proceedings of the 3rd International Conference of Pattern Recognition and Image Analysis (IPRIA 2017), ShahrKord, Iran, April 2017.
- C31. Maanijou, R. and **Mirroshandel, S. A.** “Degarbayan: Developing a Persian Paraphrase Corpus using Crowdsourcing”. Proceedings of the 22nd Annual Int. CSI Computer Conference (CSICC'2017), Tehran, Iran, March 2017. ***BEST PAPER AWARD***
- C30. Bakhshinejad, M. and **Mirroshandel, S. A.** “Path Detection Using Harmony Search in Automated Guided Vehicle”. Proceedings of the 22nd Annual Int. CSI Computer Conference (CSICC'2017), Tehran, Iran, March 2017.
- C29. Mokhtari, E. and **Mirroshandel, S. A.** “Improving Prediction Accuracy of Insurance Customers Clustering using Bagging Method”. Proceedings of the 22nd Annual Int. CSI Computer Conference (CSICC'2017), Tehran, Iran, March 2017.
- C28. Fallah, M. H., Ahmadifar, H., **Mirroshandel, S. A.**; and Baghaei, A. “A Novel Feature Selection Method based on Ant Colony Algorithm”. Proceedings of the 22nd Annual Int. CSI Computer Conference (CSICC'2017), Tehran, Iran, March 2017.
- C27. Abizad, S., Ahmadifar, H., and **Mirroshandel, S. A.** “A Novel Algorithm for Solving Gender Detection Problem”. Proceedings of the 22nd Annual Int. CSI Computer Conference (CSICC'2017), Tehran, Iran, March 2017.
- C26. Kamali, S. R. and **Mirroshandel, S. A.** “Developing a recommender system based on comments of users on video social network”. Proceedings of the 22nd Annual Int. CSI Computer Conference (CSICC'2017), Tehran, Iran, March 2017.
- C25. Sabeti, B., Hosseini, P., Ghassem-sani, G. R., and **Mirroshandel, S. A.** “LexiPers: An ontology based sentiment lexicon for Persian”. Proceedings of the 2nd Global Conference on Artificial Intelligence (GCAI 2016), Berlin, Germany, September 2016.
- C24. Gorji, A., Ahmadi, F., and **Mirroshandel, S. A.** “Correlation Analysis as a dependency measure for inferring from time-lagged gene regulatory network”. Proceedings of the 8th international conference on Information and Knowledge Technology (IKT 2016), Hamedan, Iran, September 2016.
- C23. Boreshban, Y. and **Mirroshandel, S. A.** “Rasael and Masaeil: Developing a Corpus on Persian Question and Answering”. Proceedings of the 20th Annual Int. CSI Computer Conference (CSICC'2015), Mashhad, Iran, March 2015.

- C22. Hosseini, P., and **Mirroshandel, S. A.** “Sentiment Analysis Lexicon: Developing a sentiment lexicon for Persian based on Seed Words”. Proceedings of the 3rd conference of Computational Linguistics (CLC 2014), Tehran, Iran, December 2014.
- C21. Khalatbari, S. and **Mirroshandel, S. A.** “Automatic Ontology Construction and its Improvement using Google Search Engine”. Proceedings of the 3rd conference of Computational Linguistics (CLC 2014), Tehran, Iran, December 2014.
- C20. Hosseini, P., Maleki, H., Ahmadian, A., Anvari, M., and **Mirroshandel, S. A.** “A Persian Sentiment Analysis Corpus, SentiPers: Building a sentiment analysis corpus for Persian”. Proceedings of the 3rd conference of Computational Linguistics (CLC 2014), Tehran, Iran, December 2014.
- C19. Eshaghzadeh M., Ghassem-Sani G. R., **Mirroshandel, S. A.**, Yaghoobzadeh Y. and Karimi Hosseini N. Mirroshandel, S. A. and Ghassem-Sani, G. R. “Temporal Relation Classification in Persian and English contexts”. Proceedings of the Recent Advances of Natural Language Processing (RANLP 2013), Hissar, Bulgaria, September 2013.
- C18. **Mirroshandel, S. A.**, Nasr, A. and Sagot, B. “Introducing Subcategorization Frames in a Parser Using Sub-parses Recombining”. Proceedings of the 2013 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL), Atlanta, USA, June 2013.
- C17. Yaghoobzadeh Y., Ghassem-Sani G. R., **Mirroshandel, S. A.**, and Eshaghzadeh M. “ISO-TimeML Event Extraction in Persian Text”. Proceedings of the 24th International Conference on Computational Linguistics (COLING), Mumbai, India, December 2012.
- C16. **Mirroshandel, S. A.**, Nasr, A. and Le Roux, J. “Semi-supervised Dependency Parsing using Lexical Affinities”. Proceedings of the 50th Annual Meeting of the Association for Computational Linguistics (ACL), Jeju, South Korea, July 2012.
- C15. Le Roux, J., Favre, B., Nasr, A., and **Mirroshandel, S. A.** “Generative Constituent Parsing and Discriminative Dependency Reranking: Experiments on English and French”. ACL Joint Workshop on Statistical Parsing and Semantic Processing of Morphologically Rich Languages, Jeju, South Korea, July 2012.
- C14. **Mirroshandel, S. A.**, Ghassem-Sani, G. R. “Temporal Relation Classification Using Dependency Convolution Tree Kernels”. Proceedings of the 5th Language & Technology

Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics, Poland, November 2011.

C13. **Mirroshandel, S. A.**, Ghassem-Sani, G. R., and Nasr, A. “Active Learning Strategies for Support Vector Machines, Application to Temporal Relation Classification”. Proceedings of International Joint Conference on Natural Language Processing (IJCNLP 2011), Chiang Mai, Thailand, November 2011.

C12. **Mirroshandel, S. A.** and Nasr, A. “Active Learning for Dependency Parsing Using Partially Annotated Sentences”. Proceedings of International Conference on Parsing Technologies (IWPT 2011), Dublin, Ireland, October 2011.

C11. **Mirroshandel, S. A.** and Ghassem-Sani, G. R. “Temporal Relation Extraction Using Expectation Maximization”. Proceedings of the Recent Advances of Natural Language Processing (RANLP 2011), Hissar, Bulgaria, September 2011.

C10. Le Roux, J., Favre, B., **Mirroshandel, S. A.** and Nasr, A. “Modèles Génératif et Discriminant en Analyse Syntaxique : Expériences sur le Corpus Arboré de Paris 7”. Proceedings of Traitement Automatique des Langues Naturelles (TALN), Montpellier, France, July 2011. ***BEST PAPER AWARD***

C9. Mostafazadeh, N., **Mirroshandel, S. A.**, Ghassem-Sani, G. R. and Bakhshandeh, O. “Pazesh: A Graph-Based Approach to Increase Readability of Automatic Text Summaries”. Proceedings of Canadian Conference on Artificial Intelligence 2011, Canada, May 2011.

C8. **Mirroshandel, S. A.** and Ghassem-Sani, G. R. “Temporal Relations Learning with a Bootstrapped Cross-document Classifier”. Proceedings of the 19th European Conference on Artificial Intelligence (ECAI 2010), Lisbon, Portugal, August 2010.

C7. **Mirroshandel, S. A.**, Khayyamian, M. and Ghassem-Sani, G. R. “Event-Time Temporal Relation Classification Using Syntactic Tree Kernels”. Proceedings of the 4th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics, Poland, November 2009.

C6. **Mirroshandel, S. A.**, Ghassem-Sani, G. R. and Khayyamian, M. “Using Tree Kernels for Classifying Temporal Relations between Events”. Proceedings of the 23rd Pacific Asia Conference on Language, Information and Computation (PACLIC23), Hong Kong, December 2009.

C5. Khayyamian, M., **Mirroshandel, S. A.** and Abolhasani, H. “Boosting Syntactic Tree-based Relation Extraction Performance Using a Generalized Convolution Tree Kernel”. Proceedings of the 14th Annual Int. NAACL HLT SRWS 2009, Colorado, USA, June 2009.

C4. **Mirroshandel, S. A.**, Ghassem-Sani, G. R. and Nakhost H. “Supervised Grammar Induction Using Viterbi Algorithm”. Proceedings of the 14th Annual Int. CSI Computer Conference (CSICC'2009), Tehran, Iran, March 2009.

C3. **Mirroshandel, S. A.** and Ghassem-Sani, G. R. “Unsupervised Grammar Induction Using a Parent Based Constituent Context Model”. Proceedings of the 18th European Conference on Artificial Intelligence (ECAI 2008), University of Patras, Patras, Greece, July 2008.

C2. Honarpisheh, M A., GhassemSani, G. R. and **Mirroshandel, S. A.** “A Multi-document Multi-lingual Summarizer”. Proceeding of the 3rd International Joint Conference on Natural Language Processing, Hyderabad, India, January 2008

C1. **Mirroshandel, S. A.**, GhassemSani, G. R. and Honarpisheh, M. A. “Using of the Constituent Context Model to Induce a Grammar for a Free Word Order Language: Persian”. Proceedings of the 3rd Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics, Poland, October 2007.

HONORS AND AWARDS

- **(2020) Best Guilan Researcher Award**, among all professors in the Engineering field, Guilan province.
- **(2018) Best Researcher Award**, among about 100 professors of Faculty of Engineering, University of Guilan.
- **(2018) Best Applied Research Project Award** from Ministry of Science, Research and Technology (Nation-wide award)
- **(2018) Best Professor Award**, among about 100 professors of Faculty of Engineering, University of Guilan.
- **(2017) Best Researcher Award** at University of Guilan.
- **(2017) Best Paper Award** at CSICC 2017 Conference, Tehran, Iran.
- **(2015) Best Professor Award**, among all Computer Engineering department professors, Selected by students.
- **(2014) Best Professor Award**, among all Computer Engineering department professors, Selected by students.

- **(2011) Best Paper Award** at TALN 2011 Conference, Montpellier, France.
- **(2010-2011) Research grant from French National Research Agency (ANR)** for working on project "Large coverage probabilistic syntactic parsing of French (SEQUOIA)".
- **(2009) First Rank Award**, for achieving the best GPA among all university Computer Engineering students.
- **(2007) Ph.D. Admission** from **Sharif University of Technology**, Tehran.
- **(2007) Ph.D. Admission** from **University of Tehran**, Tehran.
- **(2007) Ph.D. Admission** from **Amirkabir University of Technology**, Tehran.
- **(2007) Ph.D. Admission** from **University of Tarbiat Modarres**, Tehran.
- **(2007) First Rank Award**, for achieving the best GPA among all university Computer Engineering students.
- **(2006) First Rank Award**, for achieving the best GPA among all university Computer Engineering students.
- **(2005) Top 0.1% (Ranked 16th)**, *National Olympiad of Academic Students in Computer Engineering among all BS Students*, very competitive with nearly 30,000 participants.
- **(2005) Second Team Rank in ACM programming contest**, for achieving the second place among all university Computer Engineering students in ACM programming contest and participating in final Asian level.
- **(2004) Second Rank and F.O.E Award**, *F.O.E (Faculty of Engineering) 2nd Award* for achieving the second GPA among all university Computer Engineering students and appreciated by the Faculty Dean.
- **(2003) Third Rank and F.O.E Award**, *F.O.E (Faculty of Engineering) 3rd Award* for achieving the third GPA among all university Computer Engineering students and appreciated by the Faculty Dean.
- **(2001) Top 0.01% (Ranked 88th)**, *nationwide entrance exam of Iranian Universities*, very competitive with nearly 500,000 participants.
- **(1990-2001) First Rank**, *In all years of school and high school.*

**RESEARCH and
WORK
EXPERIENCES**

**September 2016
until now**

Designing and implementation of a Big Data Recommender System

We are working to employ Machine Learning techniques to enhance the quality of Recommender systems for text resources such as books and academic papers. It is a huge dataset with more than 200,000,000 documents.

**September 2017
until now**

Prediction of Water usage of customers in Guilan Province

In this project, our focus is prediction of water usage of customers in Guilan province. We have applied Time Series Analysis techniques in this project.

**September 2017
until September
2019**

Detecting Behavioral Patterns of Non-Technical Losses in Power Distribution by applying Time Series Analysis

In this project, we have identified the abnormal behavior of customers in power consumption. In this project, the behavior of over 200,000 customers were studied.

**September 2017
until September
2019**

Applying data mining algorithms to improve customer relationship management in the dairy industry

In this project, in order to develop time series forecasting models, sales data of some of the products of one of the dairy products manufacturers were investigated and preprocessed. Sales and products returns forecasting models for each of the products under study were developed based on deep learning algorithms.

**September 2016
until September
2018**

Intelligence Advertising Using Data Mining Techniques

In this project, we have provided a solution to identify the customer's function in purchasing by combining clustering method with classification and combining association rules with classification in order to provide an appropriate advertisement.

**September 2016
until September
2018**

Prediction of respiratory attacks process considering climate condition based on Time Series Analysis Techniques

We have found a model is finding a way to decrease the consequences of respiratory disease occurrence for health care center that accept this kind of patient.

**December 2017
until now**

Deep Learning for Event and Temporal Relation Extraction

In this project, we have focused on applying deep learning for extraction of events and temporal relation extraction from text, especially in Persian.

- December 2017
until now** **Automatic Configuration of Hyper-parameters in Deep Learning**
- In this project, we have focused on some machine learning and meta-heuristic algorithms to automatically configure the hyper-parameters in deep Learning.
- September 2017
until now** **Deep Learning for Medical Image Processing in IVF-ICSI Treatment**
- In this project, we are working in deep learning in image processing for automatically detection of best sperms and oocytes in IVF-ICSI treatment for infertile couples.
- December 2016
until April 2018** **Applying Data Mining Techniques to Medical Datasets**
- In this project, different data mining techniques were applied to different medical datasets (e.g., Infertility dataset and Kidney Disease dataset).
- April 2016 until
December 2017** **A Gender Detection System for Persian**
- In collaboration with my lab members, we are working on a system in Persian to detect the gender of writers in weblogs. In this project, we prepared a hand-made corpus for this issue.
- January 2016 until
now** **A Persian Summarization System using Deep Learning**
- In collaboration with my lab members, we are working on a summarization system that uses deep learning technique.
- January 2016 until
September 2017** **A Paraphrase Detection System for Persian**
- In collaboration with my lab members, we have prepared a corpus for paraphrase detection task. Now, we are working on applying machine learning techniques to this task.
- October 2015 until
July 2017** **A Sentiment Analysis System for Persian**
- In collaboration with my lab members, we have created a large dataset for sentiment analysis task. Then, we have designed a sentiment analysis system for Persian.
- January 2014 until
September 2016** **Automatic Ontology Extraction from Wikipedia**
- In collaboration with my lab members, we have automatically extracted ontology from Wikipedia. Domain of our work was about animals.

- January 2014 until September 2016** **A System for Best Sperm Selection using Artificial Intelligence in Infertility Treatment**
- In collaboration with my lab members, we have created a system that takes the picture of each sperm as input. Then, we applied image processing technique to extract features of the target sperm. Finally, by applying data mining techniques on the extracted features, we are able to select the best sperm for infertility treatment. Our designed system is the state-of-the-art system in this task.
- January 2014 until September 2016** **A Question Answering system on Religious Texts**
- In collaboration with my lab members, we have designed a question answering system for religious texts.
- January 2014 until January 2016** **Semi-Supervised Parsing Techniques**
- Under supervision of Professor Nasr. We are working to employ some unannotated data to build a state-of-the-art parser for French.
- January 2011 until October 2015** **Applying Active Learning to Dependency Parsing**
- Under supervision of Professor Nasr. Our work led to a highly accurate system for dependency parsing of sentences.
- October 2010 until October 2011** **A System for Persian Summarization**
- Under supervision of Professor Ghassem-Sani. Our work led to a system for Persian summarization.
- July 2010 until October 2012** **A System for Temporal Relation Extraction between Events**
- Under supervision of Professor Ghassem-Sani. Our work led to a system for temporal relation extraction especially in English.
- October 2008 until September 2009** **A System for Co-Reference Resolution in English and Persian Languages**
- Under supervision of Professor Ghassem-Sani. Our work led to a system for co-reference resolution in English and Persian.

September 2007
until September
2008

A Text Mining System for Relation Extraction

Under supervision of Professor Abolhassani. Relation Extraction is a branch of text mining. In this project, we have proposed new methods for relation extraction from different texts.

September 2007
until October 2009

Unsupervised Grammar Induction using Constituent Context Model

Under supervision of Professor Ghassem Sani. Our work led to a system that induces the grammar of English and Persian languages in unsupervised manner. (Please see the publication Section).

June 2006 until
September 2007

A Multi-document Multi-lingual Summarization System

Under supervision of Professor Ghassem Sani. Our work led to a system that summarizes the text of variety of languages. (Please see the publication Section).

June 2006 until
September 2007

Salt and Pepper Noise Removal using Cellular Learning Automata

Under supervision of Professor Jamzad and Professor Beigy. In this project, we proposed a new approach for removing salt and pepper noise in images. (Please see the publication Section).

March 2006 until
August 2006

Designing and Implementing a Human Resource Management (HRM) and a Supply Chain Management (SCM) Systems for an ERP

Under supervision of Professor Sirjani. In this project, I designed the HRM and SCM systems for an ERP system, and I implemented these systems.

April 2005 until
September 2005

Designing and Implementing an Hospital Information System (HIS)

Under supervision of Professor Sirjani. In this project, we designed and implemented an HIS for Shariati hospital.

October 2003 until
February 2004

Intrusion Detection System (IDS)

In this project, we extended the Snort 2.0 system for IDS.

TEACHING AND PROFESSIONAL EXPERIENCES

- **(2018 - now) – Associate Professor**, Natural Language Processing, Advance Software Engineering, Data Mining, Machine Learning, Operating Systems, Data Structures, Compilers, Artificial Intelligence, Advanced Programming, Department of Computer Engineering, University of Guilan.
- **(2012 - 2018) – Assistant Professor**, Natural Language Processing, Advance Software Engineering, Data Mining, Machine Learning, Operating Systems, Data Structures,

Compilers, Artificial Intelligence, Advanced Programming, Department of Computer Engineering, University of Guilan.

- **(Spring 2009) - Lecturer**, Algorithm Design course, and Operating Systems Lab, Department of Computer Engineering, Shahriar Azad University.
- **(Spring 2008) - Lecturer**, Artificial Intelligence course, Department of Computer Engineering, Alzahra University.
- **(2007 - 2008) – Teacher Assistants Coordinator**, CE Faculty, Sharif University of Technology.
- **(Fall 2007) - Lecturer**, Artificial Intelligence course (for Shahed Students), CE Faculty, Sharif University of Technology.
- **(Spring 2007) - Teaching Assistant**, Natural Language Processing course (Dr. Ghassem Sani), CE Faculty, Sharif University of Technology.
- **(Spring 2007) - Teaching Assistant**, Machine Learning course (Dr. Beigy), CE Faculty, Sharif University of Technology.
- **(Spring 2003 & Fall 2004) - Teaching Assistant**, Advanced Programming course (Dr. Abedi Nejad), ECE Dept., University of Tehran.
- **(2005) - Scientific Programmer**, Membership in the Faculty of Engineering ACM Programming Contest Team to participate in the Asian Regional contests.

M.Sc. Project Supervision

- Using Active Learning for Intrusion Detection Enhancement
- Topic Detection and Tracking
- Spam Detection in Web
- Using Data Mining for Crime Prevention
- Sentiment Analysis in Text
- Using Confidence Measure in Natural Language Processing Applications
- Automatic Construction of Anthology using Wikipedia
- Building a Semantic Parser in English
- Using Data Mining for Customer Relationship Management
- Using GPU in Natural Language Processing Applications
- Designing a Movie Recommender System
- Analyzing Computer Games using Data Mining
- A Recommender System for Academic Purposes
- Customized Search in Academic Resources
- Data Mining in Supply Chain Management
- Using Cellular Learning Automata for Ad-hoc Networks Routing

SKILLS

- **Languages:**
 - Expert in Java, Java EE Technologies, Web Programming,
 - Proficient in C++, Python, PC Assembly, Latex, Prolog, XML.
- **Environments:** Linux, Windows, MS-DOS.
- **Natural Languages:** Fluent in Persian and English; Familiar with Arabic and French.

WORKING EXPERIENCES

2016-Now

ACM Programming Contest (University of Guilan) Coach

I'm working as coach of our teams for ACM programming contest. I teach them algorithm design and problem solving techniques. I also participate in training contests as a programmer to enhance my coding skills.

2011-2012

Université de la Méditerranée (www.univmed.fr) Research Scientist

I was working as research scientist on applying active learning methods to natural language processing applications.

Year 2010

ISIran Company (www.ISIran.ir) Project Manager

I was the project manager of a web based project about project management system. The methodology that used in this project is rational unified process (RUP).

Year 2009

ISIran Company (www.ISIran.ir) Programmer, Java Consultant

I taught java (basics and advanced) in ISIran, and I worked as a consultant in Java projects.

Year 2005 - 2007

Ray Dana Company (www.RayDana.com) Programmer, Technical Manager and Advisor for ERP Project

This project was an ERP system with J2EE Technology. The methodology that used in this project was rational unified process (RUP).

Year 2004

Ray Dana Company (www.RayDana.com) Programmer, Analyzer, Designer

This project was an MIS system with .NET Technology. The methodology that used in this project was SSADM.