

# AMJAD SEYEDI

## Graduate Research Assistant

 amjadseyedi.github.io  github.com/AmjadSeyedi

 +98 936 672 1167  amjadseyedi@uok.ac.ir

 Representation Learning Lab (222), Computer Engineering Department, Engineering Faculty, University of Kurdistan, Sanandaj, Iran

### BRIEFLY

As a graduate research assistant at the University of Kurdistan, I work on representation learning with a focus on robustness and generalization. I also lead the Algebraic Machine Learning Team (AML team), a group that explores fundamental methods in unsupervised machine learning and representation theory. I have a Master's degree in Artificial Intelligence from the same university, where I worked with Dr. Parham Moradi and Dr. Fardin Akhlaghian on matrix factorization and low-rank approximation for various applications such as semi-supervised learning, recommendation systems, and multi-label classification. I also have an Associate and a Bachelor's degree in Software Engineering.

### RESEARCH INTERESTS

- Machine learning, Representation learning, Numerical Linear Algebra
- Generalization, Low-rank approximation, Adversarial training
- Deep Learning, Self-supervised/Semi-supervised learning
- Robustness, Fairness, Interpretability, Explainability

### EDUCATION

Master	<b>Artificial Intelligence, UNIVERSITY OF KURDISTAN, SANANDAJ, IRAN, (Sep 2015 – Feb 2018)</b> <ul style="list-style-type: none"><li>&gt; Thesis title : A Graph-based Semi-Supervised Learning Approach for Multi-Label Classification.</li><li>&gt; Advisors : Dr. Parham Moradi and Dr. Fardin Akhlaghian.</li><li>&gt; Courses : machine learning, statistical pattern recognition, neural networks, advanced artificial intelligence, computer vision, digital image processing, distributed systems, and fuzzy sets &amp; systems.</li></ul>
Bachelor	<b>Software Engineering, AMIRKABIR TECHNICAL COLLEGE, ARAK, IRAN, (Jan 2012 – Jun 2014)</b> <ul style="list-style-type: none"><li>&gt; Project title : Manufacturing and Setting up a Video Conferencing Software.</li></ul>
Associate	<b>Computer Software, TABRIZ TECHNICAL COLLEGE, TABRIZ, IRAN, (Jan 2009 – Jun 2011)</b> <ul style="list-style-type: none"><li>&gt; Supplementary courses in computer science and software engineering.</li></ul>
TechSchool	<b>Computer, TALEGHANI HIGH SCHOOL, SANANDAJ, IRAN, (Sep 2005 - Jun 2007)</b> <ul style="list-style-type: none"><li>&gt; A two-year education in basic computer science</li></ul>

### EXPERIENCE

Thesis Advisor	<b>Artificial Intelligence (graduate), UNIVERSITY OF KURDISTAN, SANANDAJ, IRAN, (Sep 2020 - Present)</b> <ul style="list-style-type: none"><li>&gt; eight students have graduated. I am currently advising four master's students.</li><li>&gt; Topics : representation learning, deep learning, matrix factorization, semi-supervised learning, self-supervised learning, robust learning, and sparse coding.</li><li>&gt; problems : data representation, data clustering, graph clustering, recommendation systems, link prediction, and feature selection.</li></ul>
Research Assist.	<b>Representation Learning, UNIVERSITY OF KURDISTAN, SANANDAJ, IRAN, (Sep 2019 – Present)</b> <ul style="list-style-type: none"><li>&gt; Topics : matrix factorization, distributionally robust learning, generalization, and adversarial training</li><li>&gt; applications : image inpainting and recommendation systems.</li></ul>
Teaching Assist.	<b>Artificial Intelligence (graduate), UNIVERSITY OF KURDISTAN, (Jan 2019 – Present)</b> <ul style="list-style-type: none"><li>&gt; Advanced Concepts in Artificial Intelligence (Graduate), Spring 2023, Fall 2023</li><li>&gt; Nonnegative Matrix Factorization for Machine Learning (Graduate), Fall 2022</li><li>&gt; Pattern Recognition (Graduate), Spring 2019 – Spring 2023</li><li>&gt; Special Topics in Artificial Intelligence (Graduate), Fall 2021</li><li>&gt; lectures : Semi-supervised learning, Modern Machine Learning Paradigms, Nonnegative matrix factorizations, Transformer Networks</li></ul>
Lab Instructor	<b>Computer Lab (undergraduate), UNIVERSITY OF KURDISTAN, SANANDAJ, IRAN, (Fall 2019)</b> <ul style="list-style-type: none"><li>&gt; I had two 14-person classes on computer basics.</li></ul>

- Under-Review** | **A Bi-level Deep Human Action Representation based on the Sequence of Action Segments**  
F. Akhlaghian, M. Ramezani, H. Afshoon, **S. A. Seyedi**, and A. Moradiani  
*Neural Computing and Applications* [3rd Revision], November 2023.
- 2024** | **Towards Cohesion-Fairness Harmony : Contrastive Regularization in Individual Fair Graph Clustering**  
S. Ghodsi, **S. A. Seyedi**, and E. Ntoutsis.  
*Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, 2024 [Accepted].
- Orthogonal Encoder-Decoder Factorization for Unsupervised Feature Selection**  
M. Mozafari, **S. A. Seyedi**, R. Pirmohamadiani, and F. Akhlaghian.  
*Information Sciences*, 2024.
- Multi-Label Feature Selection with Global and Local Label Correlation**  
M. Faraji, **S. A. Seyedi**, F. Akhlaghian, and R. Mahmoodi.  
*Expert Systems with Applications*, volume 246, 2024, pp. 123198.
- Deep Asymmetric Nonnegative Matrix Factorization for Graph Clustering**  
A. Hajiveisheh, **S. A. Seyedi**, and F. Akhlaghian.  
*Pattern Recognition*, volume 148, 2024, pp. 110179.
- 2023** | **Link Prediction by Adversarial Nonnegative Matrix Factorization**  
R. Mahmoodi, **S. A. Seyedi**, F. Akhlaghian, and A. Abdollahpour.  
*Knowledge-based Systems*, volume 280, 2023, pp. 110998.
- Self-Supervised Semi-Supervised Nonnegative Matrix Factorization for Data Clustering**  
J. Chavoshinejad, **S. A. Seyedi**, and F. Akhlaghian.  
*Pattern Recognition*, volume 137, 2023, pp. 109282.
- Adversarial Elastic Deep Nonnegative Matrix Factorization for Matrix Completion**  
**S. A. Seyedi**, F. Akhlaghian, A. Lotfi, N. Salahian, and J. Chavoshinejad  
*Information Sciences*, volume 621, 2023, pp. 562-579.
- Deep Autoencoder-Like NMF with Contrastive Regularization and Feature Relationship Preservation**  
N. Salahian, F. Akhlaghian, **S. A. Seyedi**, and J. Chavoshinejad  
*Expert Systems with Applications*, volume 214, 2023, pp. 119051.
- 2020** | **Asymmetric Semi-Nonnegative Matrix Factorization for Directed Graph Clustering**  
R. Abdollahi, **S. A. Seyedi**, and M. R. Noorimehr  
*IEEE International Conference on Computer and Knowledge Engineering (ICCKE)*, 2020, pp. 323-328.
- 2019** | **Self-Paced Multi-Label Learning with Diversity**  
**S. A. Seyedi**, S. S. Ghodsi, F. Akhlaghian Tab, M. Jalili, and P. Moradi  
*Asian Conference on Machine Learning (ACML)*, 2019, pp. 790–805.
- 2018** | **Dynamic Graph-based Label Propagation for Density Peaks Clustering**  
**S. A. Seyedi**, A. Lotfi, P. Moradi, and N. N. Qader  
*Expert Systems with Applications*, Volume 115, 2019, pp. 314-328.
- 2017** | **A Weakly-Supervised Factorization Method with Dynamic Graph Embedding**  
**S. A. Seyedi**, P. Moradi, and F. Akhlaghian Tab  
*IEEE Artificial Intelligence and Signal Processing Conference (AISP)*, 2017, pp. 213-218.
- A Clustering-based Matrix Factorization Method to Improve the Accuracy of Recommendation Systems**  
Z. Shajarian, **S. A. Seyedi**, and P. Moradi  
*IEEE Iranian Conference on Electrical Engineering (ICEE)*, 2017, pp. 2241-2246.
- 2016** | **An Improved Density Peaks Method for Data Clustering**  
A. Lotfi, **S. A. Seyedi**, and P. Moradi  
*IEEE International Conference on Computer and Knowledge Engineering (ICCKE)*, 2016, pp. 263-268.

## COMPUTER SKILLS

---

<b>Operating Systems</b>	<b>Microsoft Windows</b> and <b>Linux</b> (ubuntu, centOS, fedora, and RedHat distributions)
<b>Word processing &amp; Presentation</b>	Office suites, <b>LaTeX</b> , and Manim (animation engine for explanatory math videos)
<b>Vector and raster softwares</b>	Adobe Illustrator, CorelDRAW, Inkscape, Adobe Photoshop, and GIMP
<b>Development Tools</b>	Pycharm, Jupyter Notebook, Colab, Visual Studio, IntelliJ Idea, and Eclipse
<b>Web design</b>	HTML, CSS, ASP.NET, and JavaScript

## PROGRAMMING LANGUAGES

---

2019 – present	<b>Python</b> , PyTorch, NumPy, and scikit-learn
2015 – 2020	<b>MATLAB</b> , linear algebra and visualization
2012 – 2015	<b>JAVA</b> , object-oriented software engineering and web development
2009 – 2015	<b>C++   C#</b> , Software Engineering and Web development
2007 – 2009	<b>Basic   Visual Basic</b> , Software Engineering

## REFERENCES

---

**Fardin Akhlaghian**, *Associate Professor*  
Department of Computer Engineering  
UNIVERSITY OF KURDISTAN, SANANDAJ, IRAN  
@ f.akhlaghian@uok.ac.ir  
☎ +98 918 873 8383

**Alireza Abdollahpouri**, *Associate Professor*  
Department of Computer Engineering  
UNIVERSITY OF KURDISTAN, SANANDAJ, IRAN  
@ abdollahpouri@uok.ac.ir  
☎ +98 918 877 0993

**Parham Moradi**, *Associate Professor*  
Department of Computer Engineering  
UNIVERSITY OF KURDISTAN, SANANDAJ, IRAN  
@ p.moradi@uok.ac.ir  
☎ +98 912 513 5478

**Mahdi Jalili**, *Professor*  
School of Electrical and Computer Engineering  
RMIT UNIVERSITY, MELBOURNE, AUSTRALIA  
@ mahdi.jalili@rmit.edu.au  
☎ +61 399 251 223

---

End of CV