

# Ali Hassani

## Curriculum Vitae

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AliHassaniJr • AliHassaniJr • Ali Hassani

### Education

2016–2020 **Bachelor of Science in Computer Science**, *Shahid Bahonar University of Kerman*, Kerman, Iran, 4.0 GPA since 2017.

Thesis: Clustering-based feature selection

### Technical skills

Programming C/C++, PHP, Python, MATLAB, Java, JavaScript, C#, Pascal

Scripting Prolog, Shell, HTML, CSS,  $\LaTeX$

Machine Learning TensorFlow, Keras, Scikit-Learn, WEKA

Database Systems MySQL, Microsoft SQL Server, MS Access

### Test Scores

	Verbal Reasoning	Quantitative Reasoning	Analytical Writing	
GRE General	156/170	164/170	4.0/6.0	
	Reading	Listening	Speaking	Writing
TOEFL iBT	28/30	29/30	30/30	28/30

### Publications

2019 Ali Hassani, Amir Iranmanesh, Mahdi Eftekhari and Abbas Salemi. *DISCERN: Diversity-based Selection of Centroids for  $k$ -Estimation and Rapid Non-stochastic Clustering*. Under review at Information Sciences. 2019. arXiv:1910.05933

Ali Hassani, Amir Iranmanesh and Najme Mansouri. *Text Mining using Nonnegative Matrix Factorization and Latent Semantic Analysis*. Submitted to Applied Intelligence. 2019. arXiv:1911.04705

Ali Hassani, Mohammad Saleh Ebrahimi Shahabadi and Najme Mansouri. *Benchmark Selection: A fast clustering-based PSO-optimized feature selection strategy*. Under review at Soft Computing. 2019. Manuscript available upon request.

### Research Interests

Deep Learning, Representation learning, Unsupervised and semi-supervised learning, Generative models, Text Mining, Computer Vision, Matrix analysis in Machine Learning, Linear Algebra.

## Current Projects

- Semantic analysis for employee feedback systems
- Document scanning using singular value decomposition
- Unsupervised Deep Clustering
- Feature selection using self-representation and spectral clustering

## Experience

### Teaching and Mentoring Experience

- Fall sem. 2019 **Linear Algebra Teaching Assistant**, *Shahid Bahonar University of Kerman*, Kerman, Iran.  
I instruct programming using Python, Numpy and its linear algebra functions, and introductory machine learning tasks such as clustering, spectral embedding, etc.
- Spring sem. 2019 **Internet engineering Teaching Assistant**, *Shahid Bahonar University of Kerman*, Kerman, Iran.  
Instructed the class on server-side PHP programming as well as creating web clients using jQuery and AJAX.
- Spring sem. 2019 **Advanced Programming Teaching Assistant**, *Shahid Bahonar University of Kerman*, Kerman, Iran.  
Gave the class programming assignments, gave advice and tutored on students projects.
- Fall sem. 2017 **Advanced Programming Teaching Assistant**, *Shahid Bahonar University of Kerman*, Kerman, Iran.  
Gave advice on students projects, helped with the final project evaluations.

### Research Experience

- Since 2019 **Research Assistant**, *Mahani Mathematical Research Center*, Kerman, Iran.  
Working on multiple projects while also providing guidance to other researchers in the area of machine learning, and especially in terms of programming. Some of my work includes:
- Deep Unsupervised Clustering
  - Text Mining and NLP using matrix analysis
  - Spectral Clustering
  - Unsupervised feature selection using self-representation
- Since 2018 **Undergraduate researcher**, *Department of Computer Science, Shahid Bahonar University of Kerman*, Kerman, Iran.  
Working on multiple projects including, but not limited to:
- Supervised clustering-based feature selection
  - Text Mining using Nonnegative Matrix Factorization

### University Service

- Since 2019 **Data Mining and Machine Learning Group Member**, *Mahani Mathematical Research Center*, Kerman, Iran.  
Attend weekly discussions, courses and give advice to other members. Gave two lectures in the weekly meetings:
- Clustering-based feature selection (with M.S. Ebrahimi Shahabadi)
  - FaceNet: Face representation learning using triplet loss (with A. Iranmanesh)

2018-2019 **Computer Science Association Member**, *Department of Computer Science, Shahid Bahonar University of Kerman, Kerman, Iran.*

Some of my duties and achievements included:

- Held the 2nd annual Saba Programming Contest
- Held programming courses for undergraduate students
- Gave advice on coursework and provided guidance to freshman students

2018-2019 **2nd Saba Programming Contest Technical Coordinator**, *Department of Computer Science, Shahid Bahonar University of Kerman, Kerman, Iran.*

I was in charge of the technical duties such as:

- Building the website, web-based registration, and online scoreboard.
- Setting up the departments computers and connecting them to a centralized network for the contest.

### Professional Experience

2018-2019 **Web Developer**, *Diayar, LLC, Kerman, Iran.*

Developed the web service APIs as well as the web client for the startup Diayar, which was designed to assist diabetes patients. The startup was one of the finalists at Silk Road Startup accelerator, Kerman regional. I was also in charge of presenting the 5 minute pitch of the startup during the event.

Since 2016 **Freelance Web Developer.**

Developed websites and online services during summer breaks. Some of these services include:

- Online paystub management system for a private company
- Website design and web hosting management for individuals and private businesses

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### Honors

2015 **Khawrazmi International Award Finalist**, *Khawrazmi International Awards, Tehran, Iran.*

Entered the contest with a voice assistant application in my native language and won the regional, entered the finals in Tehran.

Since 2016 **Scholarship Fund for undergraduate research and studies**, *National Iranian Copper Industries Company, Kerman, Iran.*

Received a scholarship fund per semester based on the semesters GPA, number of credits and rank.

Since 2016 **1st Rank Student**, *Department of Computer Science, Shahid Bahonar University of Kerman, Kerman, Iran.*

First rank student among all students in the class of 2016 since the first semester, based on the number of courses and the grades received.

2019 **Distinguished researcher**, *Faculty of Mathematics and Computer, Shahid Bahonar University of Kerman, Kerman, Iran.*

Awarded distinguished researcher among the undergraduate students in the Department of Computer Science for research conducted in Machine Learning.

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### Languages

English Professional working proficiency  
Farsi(Persian) Native speaker

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## Interests

- Playing piano
- Taking online courses
- Swimming
- Board Games
- Running
- Cooking

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## References

**Abbas Salemi Parizi**, *Director of Mahani Mathematical Research Center.*

Professor at the Department of Applied Mathematics  
Faculty of Mathematics and Computer  
Shahid Bahonar University of Kerman  
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**Mohammad Amiri Zarandi**, *PhD Candidate at the University of Guelph.*

Former lecturer at the Department of Computer Science  
Faculty of Mathematics and Computer  
Shahid Bahonar University of Kerman  
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**Mahdi Eftekhari**, *Head of the Department of Computer Engineering.*

Associate Professor at the Department of Computer Engineering  
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