

# Hamid MOHAMMADI

## PERSONAL INFORMATION

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BIRTH: Iran | 23 July 1996  
RESIDENCE: Tehran, Iran  
EMAILS: [hamid.mohammadi@aut.ac.ir](mailto:hamid.mohammadi@aut.ac.ir) | [sandstormeatwo@gmail.com](mailto:sandstormeatwo@gmail.com)  
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## EDUCATION

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SEP 2019 - PRESENT AMIRKABIR UNIVERSITY OF TECHNOLOGY  
Master of Science, Artificial Intelligence  
  
SEP 2014 - DEC 2018 K. N. TOOSI UNIVERSITY OF TECHNOLOGY  
Bachelor of Science, Computer Engineering

## WORK EXPERIENCE

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JULY 2019 - PRESENT **Computer Vision Engineer: Sensifai**  
Building intelligent surveillance services, I was involved in several projects including face detection and recognition, fire detection, violence detection, object detection, motion localization, and so forth. Moreover, I participated in designing and implementing efficient real-time hardware-accelerated multi-stream video analysis tools.  
Website: [Sensifai.com](https://sensifai.com) | [Sentiligence.com](https://sentiligence.com)

NOV 2016 - SEP 2017 **Junior Big-Data and Artificial Intelligence Engineer: Yooz Search Engine**  
My task as an artificial intelligence Engineer in this company was to help the web search team attain its goals by designing and implementing artificial intelligence solutions mainly related to Natural Language Processing and Machine learning. Some of these projects are Duplicate and near-duplicate document detection in big data applications, which mainly was about dimensionality reduction, and Persian text difficulty assessment and Persian transliteration, which were implemented in Big-Data environments.  
Website: [Yooz.ir](https://yooz.ir)

SEP 2016 - NOV 2016 **Summer Internship: Yooz Search Engine**  
In this summer internship, I worked on projects such as Persian sentiment analysis, Persian text similarity measurement, and offensive words filtering.  
Website: [Yooz.ir](https://yooz.ir)

SEP 2015 - AUG 2016 **Android Developer: Noghteh Web Services**  
My primary goal in this company was to design and implement the "ClassPlus" android application, an educational management, and a self-assessment assistant.  
Linkedin: [Noghteh Web Services](https://www.linkedin.com/company/noghteh-web-services)

## COMPUTER SKILLS

FLUENT PROGRAMMING LANGUAGES	Python
MACHINE LEARNING CONCEPTS	Deep Architectures (Classification, Object-Detection, Time-series, ...) Reinforcement Learning (Q-Learning, DRL, ...) Classical Models (SVM, Random Forest, ...)
FRAMEWORKS AND TOOLS	Tensorflow + Keras (CPU-GPU) Scikit-learn OpenCV Python DeepStream framework and tools GStreamer framework and tools FFmpeg TensorRT Setuptools Git - GitLab Latex Maven
ALSO FAMILAR WITH	Docker Celery Redis Hadoop and MapReduce MySQL and SQLite
FAMILIAR PROGRAMMING LANGUAGES	Java C/C++ Assembly 8086 C Embedded Matlab Php HTML and Javascript
OPERATING SYSTEMS	Linux (Ubuntu)

## RESEARCH EXPERIENCE

### **Hamid Mohammadi, Ehsan Nazerfard, "Video Violence Detection using Deep Reinforcement Learning"**

Master Thesis, In Preparation

Attention mechanisms are present in every intelligence being. These mechanisms help the intelligence agent focus on the essential information in its environment, increasing its precision and efficiency. The human eye is an intriguing visual attention device. This study is focused on reproducing such mechanisms in a video classification system to detect human violence using deep reinforcement learning.

### **Hamid Mohammadi, Seyed Hossein Khasteh, "Text as Environment: A Deep Reinforcement Learning Text Readability Assessment Model"**

Preprint | [arXiv:1912.05957](https://arxiv.org/abs/1912.05957)

Deep reinforcement learning models are demonstrated to be helpful in further improvement of state-of-the-art text readability assessment models. The main contributions of the proposed approach are the automation of feature extraction, loosening the tight language dependency of text readability assessment task, and efficient use of text by finding the minimum portion of a text required to assess its readability. The experiments on Weebit, Cambridge Exams, and Persian readability datasets display the model's state-of-the-art precision, efficiency, and the capability to be applied to other languages.

### **Hamid Mohammadi, Seyed Hossein Khasteh, Amin Nikoukaran, "A Machine Learning Approach to Persian Text Readability Assessment Using a Crowdsourced Dataset"**

Accepted at 2020 28th Iranian Conference on Electrical Engineering (ICEE) | [arXiv:1810.06639](#)

In the present research, the first Persian dataset for text readability assessment was gathered and the first model for Persian text readability assessment using machine learning was introduced. The experiments showed that this model was accurate and could assess the readability of Persian texts with a high degree of confidence.

### **Hamid Mohammadi, Seyed Hossein Khasteh, "A Fast Text Similarity Measure for Large Document Collections Using Multi-reference Cosine and Genetic Algorithm"**

Published at Turkish Journal of Electrical Engineering Computer Sciences | [TJEECS](#)

In this paper, a new signature-based approach to text similarity detection is introduced which is fast, scalable, reliable and needs less storage space. The proposed method is examined on popular text document data-sets such as CiteseerX, Enron, Gold Set of Near-duplicate News Articles and etc. The results are promising and comparable with the best cutting-edge algorithms, considering the accuracy and performance.

### **Hamid Mohammadi, Amin Nikoukaran, "Multi-reference Cosine: A New Approach to Text Similarity Measurement in Large Collections"**

Preprint | [arXiv:1810.03099](#)

In this paper, a new approach to batch text similarity detection is proposed by combining some ideas from dimensionality reduction techniques and information gain theory. The new approach is focused on search engines need to detect duplicated and near-duplicated web pages.

## **TEACHING EXPERIENCE**

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TEACHING ASSISTANT	Theory of Formal Languages and Automata Oct 2017 - Feb 2018, Sep 2018 - Feb 2019
	Computer Structure and Language Oct 2017 - Feb 2018, Feb 2018 - Jun 2018, Sep 2018 - Feb 2019
	Principles of Compiler Design Feb 2018 - Jun 2018
	Computer Networks Feb 2018 - Jun 2018
	Computer Architecture Oct 2017 - Feb 2018

## **LANGUAGES**

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PERSIAN:	Native
ENGLISH:	Full professional proficiency
	TOEFL-iBT: 106/120 (Sep 2018)
	Reading: 29, Listening: 30, Speaking: 23, Writing: 24