

# HOJJAT RAKHSHANI

## Optimization & Machine Learning Researcher

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📍 Mulhouse, France

🔗 <https://hrakhsha.github.io>

## EXPERIENCE

Universite de Haute Alsace

**Senior Researcher**

📅 September 2020 – Present

My role involves design, development, and implementation of [AI researches](#) in deep learning and optimization.

Universite de Haute Alsace

**Research Assistant**

📅 2018 – 2020

Carry out multidisciplinary machine learning, operational research and optimization researches at [IRIMAS](#).

Sistan and Baluchestan University

**Lecturer and Software Engineer**

📅 December 2016 – May 2017

Develop a unified molecular dynamics optimization software package, leading up to [EGROMACS](#) toolkit.

## SKILLS

Team Worker, Fast Learner, Dedicated



Tensorflow, Keras, Scikit-learn



AI, Big Data, Optimization



Python, C++, Matlab, R, Cuda



Spoken and written English



Slurm, Azure, Git



## ACHIEVEMENTS

- 100% PhD scholarship from Universite de Haute Alsace
- First prize in [CG:SHOP 2019](#) with 12,000 submissions
- Awarded at the 4th National Festival of Harkat
- Ranked 1st among MSc students

## PARTICIPATION

- [International Workshop on Local Search Algorithms](#)
- [International Joint Conference on Neural Networks](#)
- [International Conference on Artificial Evolution](#)
- [World Congress on Computational Intelligence](#)
- [International Conference on Bioinformatics](#)

## EDUCATION

Universite de Haute Alsace

**PhD in Data Science**

📅 May 2017 – June 2020

Sistan and Baluchistan University

**Masters in Intelligence Systems**

📅 June 2013 – December 2016

Sistan and Baluchistan University

**Bachelor in Computer Science**

📅 October 2008

## PROJECTS

### Video Architecture Search

- In this [project](#), we study the application of neural network search methods for enhancing the performance of supervised deep learning models for the crowd movements classification. In contrast to models designed for images, we can improve the results from 47.4% to 60.6%. Besides, the number of model parameters is reduced from 24 to 12 million parameters.

### Machine Learning for Information Retrieval

- This [project](#) investigates to what extent a new machine learning pipeline may preferentially identify links between similar scientific articles. Automated machine learning is applied to ease the search for a new pipeline. We show that a newly designed model achieves an accuracy of 90%, compared to the best standard classifier with an accuracy of 82%.

### Neural Search for Time Series

- Neural search has achieved great success in different big data researches such as object detection and image recognition. This [project](#) aims to find and train deep residual networks for time series data. We conducted extensive experiments on 85 instances from the UCR archive. The experimental results reveal that our proposed model reaches new state-of-the-art accuracy, by designing a single classifier that can beat HIVE-COTE, which is an ensemble of 37 individual classifiers.