

Cover letter

Masoud Akhgar

I eagerly decided to pursue my interest in Computer Engineering with a special curiosity. This interest, coincided with experiences in Laboratory that I gained during my BSc, had led me to investigate more in graduate studies. Thus I would like to pursue and contribute to your company to participate in your mission and expand my domain of knowledge. This can be regarded as my main goal of all time to see my accomplishments as a practical outcome.

During Robotic Lab. Activities, I contributed to a group, containing more than ten people, choosing to research about **motion learning papers**, by reading a collection of ML-based novel methods, so that this attempts assigned to a commercial project and developing exoskeleton robot, using neural and recurrent networks (including LSTM). you can find papers on my github.

In addition, I tried to implement an **optimization system** in my following activity. I investigated through various papers and loss functions with the potential to be applied for noisy images. Finally, we proposed a **resistant approach** against noisy signals in which I minimized the amount of error defined by correntropy loss function and the least square to detect and remove outlier noises, resulting in HOG of the image as output.

As my commercial activity, I was invited to perform a natural language project in Persian in a company giving me a perfect experience when I classify words using the descriptions provided (using TF/IDF). It was done after preprocessing like removing stopwords, using word2vec, etc. Finally I classify the representation vectors to different groups and preparing query processing.

As my last Internship after studying Master degree (AI) at Grenoble-INP, I developed XGB model after some preprocessing (visit my website for more detail), I also investigated other **ensemble methods** to optimize my model using **feature learning** or **sample weights learning** and neural network combination with mentioned strategies. All inspired from reading related papers. I can send my prepared **defence report** with consent if is needed.

I have always been motivated to grow professionally to be helpful to a group of people with the knowledge that I earn, and it had been proven during my previous activities. I would like to use my knowledge which makes me a good candidate for you, to be a helpful alongside reaching your goal for a longer period during my career path.