



# Ghazal Fallah

## AI/Machine Learning Engineer

To obtain a challenging position in Machine Learning and Deep Learning where I can grow professionally and utilize my motivation, education, and work experience to serve for the benefit of the organization.

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Saadat Abad, Tehran, Iran

## Work Experience

■ 07/2019 - Present

### Artificial Intelligence Engineer

Kavosh

Natural Language Processing, Building Chatbot

*Tasks/Achievements*

- Building assistant "Chatbot" of the company's product (A new production management application).
- Adding intelligent features as "Intelligent Search" to the mentioned application.
- Problem solving by extracting the pros and cons of different approaches, brainstorming creative ideas, and discussing in the AI team to choose the best approaches to follow.
- Designing appropriate datasets, training, and evaluating models.
- Effectively communicating with the backend team.
- Seeking the needs for intelligent features to be added to the product and sharing ideas.

■ 11/2016 - 08/2018

### Junior Signal Processing Engineer

Rasa Pardaz Ayandeh

*Tasks/Achievements*

- Design and development of simulator software to increase the convenience of the initial test process for tracking algorithms R&D.
- Assay and improvement of Object-Oriented Programming, advanced Matlab programming, software development skills, and algorithm understanding for Signal Processing Engineering.

■ 10/2015 - 05/2016

### Robotic Teacher

Soodeh Educational Complex

*Tasks/Achievements*

- Teaching students how to build a line following robot in both hardware and programming aspects and building it together.

## Projects

■ Assistant Chatbot (07/2019 - Present)

- Research and development of "Chatbot" to be the assistant of a product management application.
- Making chatbot to distinguish and follow tens (until now) of chitchat and FAQ dialogues in natural language, retrieve required information from related sources, and do required actions.
- Designing appropriate datasets due to be enough general, balanced, and have the most informative and discriminative labeling design.
- Training and evaluating models to obtain acceptable performance and stability.
- Getting deep to "Rasa" framework (Open source framework for building NLP equipped Chatbots based on Python, Spacy, Scikit-learn, and TensorFlow), investigating its different pipelines and components for NLU and Dialogue Management blocks, and utilize the most matched ones to our case.

■ Text Similarity (04/2020 - 06/2020)

- Research and development of "Intelligent Search, Text Similarity" to find and suggest the most matched documents to the input search query in logical time.
- The algorithm is an intelligent feature of a product management application.
- Implementation with Python, FuzzyWuzzy, Spacy, and Pandas.

■ Privacy-Preserving Human Pose Estimation on Cloud via CNNs (Face Identity Privacy)

(08/2018 - Present)

- Investigating a method that enables the client to use an AI service provider inferring the human poses in images/videos without revealing the identity of faces to the service provider.
- The problem is relaxed using collaborative computation and fine-tuning the CNN in a multi-objective loss function.
- Implementation of method Using Python and Caffe as a deep learning framework.

## Technical Skills

■ Programming Skills

Python, Matlab, C#, SQL, OOP

■ Libraries

Scikit-learn, OpenCV, Spacy, Pandas, Matplotlib, Numpy

■ Frameworks

Caffe, TensorFlow, Keras, Rasa (Open source framework for building NLP based Chatbots)

■ Tools & Environment

Git, Vim,  
Working comfortable with Linux  
and Command Line Interface,  
Setting up GPU for ML

■ Computer Vision

Human Pose Estimation,  
Face Detection & Recognition

■ Natural Language Processing

Natural Language Understanding,  
Intent classification, Entity Extraction, Text Similarity,  
Building Chatbots

■ Deep Learning

Convolutional Neural Networks,  
Recurrent Neural Networks

■ Machine Learning

Classification, Metric Learning,  
Privacy-Preserving

■ Technical Documentation

## General Skills

Teamwork | Creative Thinking |  
Problem-solving | Learning | Research  
| Self-Motivation

## Languages

English

*Expert*

Persian

*Native*

## ■ Smart Irrigation System (12/2014 - 08/2015)

- Design of a smart irrigation system, equipped to and base on real clock and calendar. The system could be set by both keys and SMS to irrigate regularly according to a specified plan and specified amount. It also sends various notifications as SMS to inform the user of the current function, last irrigation, history of irrigation, and so on.
- Implementation using AVR-microcontroller, GSM module, and C++ programming language.

## Education

■ 09/2016 - Present

### MS in Electrical Engineering/Telecommunications

Islamic Azad University Science & Research Branch

*Courses*

- Pattern Recognition
- Neural Network
- Image Processing
- Advanced Signal Processing
- Stochastic Process
- Communication Networks
- Information Hiding
- Advanced Communications

GPA: 4.0/4

■ 09/2009 - 08/2015

### BS in Electrical Engineering/Telecommunications

Islamic Azad University Shahr-e-Rey Branch

GPA: 3.1/4

## Certificates

■ "Internet of Things", Technology & Innovation Center Summer School (08/2017)

■ Windows Application Development (C# Programming) - Tahliladeh Institution (2016)

## Volunteer Experiences

■ 01/2013 - 07/2016

### Teacher

Imam Ali Society (NGO)

*Tasks/Achievements*

- Teaching math to elementary students.

## Interests

Data Science | Computer Vision |  
Natural Language Processing |  
FinTech | Augmented Reality |  
Neuroscience | Starting Up A Business  
| Art | Sport | Nature