

# VAHID SEYDI

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## RESEARCH INTEREST

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### Bayesian Optimization

#### Model

Black-box optimization  
Multi-objective Black-box optimization  
Meta-Learning  
Gaussian Process

#### Application

Hyper-parameter optimization  
few-shot Learning  
Transfer learning

### Deep Learning

#### Model

Deep Generative Models(GAN & VAE)  
CNN and RNN(GRU,LSTM) based models  
Bayesian Deep Learning  
Attention Mechanism  
Supervised & Unsupervised deep models

#### Application

NLP & Text mining  
Predictive Maintenance  
Anomaly detection  
Time Series Forecasting  
Machine Vision and Audio(speech) Processing  
Health Care

### Reinforcement Learning

#### Model

Deep Reinforcement Learning  
Adversarial Learning  
Actor-Critic Model  
Q-Learning & Deep Q-Network

#### Application

Autonomous Agent  
Continuous Control Systems  
Trust Region Optimization(Sentences Generation)

### Probabilistic models and latent factor analysis

#### Model

Clustering & Retrieval  
Matrix Factorization(PMF, NMF,...)  
Mixture Models  
Explainable Machine Learning(Bayes Net)

#### Application

Topic Model(LDA)  
Recommender Systems  
Graph Data(Social Network) Analysis  
Community Detection  
Dimension Reduction

## EDUCATION


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### School of Artificial Intelligence

April 2019 – June 2019

*Pi School, Pi Campus, Rome, Italy*

(one of 20 merit-based full scholarships)

- Thesis:** Predicting failures in medium voltage lines from sequence of SCADA events.  
(Sponsored By )
- Concentrations:** Deep Learning, categorical time series prediction, anomaly detection (supervised and unsupervised), generative models, embedding methods.
- Mentors:** **Sébastien Bratières** from university of Cambridge and director of AI in Translated; & **Francesco Mosconi**, CEO and Chief Data Scientist at CATALIT, San Francisco, California.
- Alumni:** I am included as the AI program Alumni. <https://picampus-school.com/about-us/>

### Ph.D. in Artificial intelligence

September 2007 – February 2014

*Azad University, Science and Research Branch, Tehran Iran*

- Thesis:** jobs interaction theory to train hyper-parameters of the cultural optimization algorithm.
- Concentrations:** cultural optimization algorithm, neural network, multi-agent system, derivative-free learning algorithm, feature extraction.
- Advisors:** [professor Mohammad Teshnehlab](#).
- GPA:** 18.79 / 20.00

### M.Sc in Artificial intelligence

September 2005 – September 2007

*Azad University, Science and Research Branch, Tehran Iran*

- Thesis:** multi-objective optimization to train neural networks and neuro-fuzzy systems.
- Concentrations:** multi-objective optimization, neural network and fuzzy system, combination of both derivative-base and derivative-free learning algorithms to prevent vanishing and exploding of gradient, and overfitting.
- Advisors:** [professor Mohammad Teshnehlab](#).
- GPA:** 18.08 / 20.00

### B.Sc. in Computer Software Engineering

September 2001 – July 2005

*Azad University, Iran*

- Thesis:** implementation of an automation system for the dairy industry.
- Concentrations:** RUP methodology, data base management, SQL, object oriented programming, designing algorithm, data structure, Java, Visual C++.
- GPA:** 18.36 / 20.00

## PUBLICATIONS([GOOGLE SCHOLAR](#))

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**2015**

**2015**

**2014**

**2010**

**2008**

**2007**

**2007**

**2007**

**2006**

**2006**

### **Under Review Publications:**

**2019** Sentiment Analysis based on Deep Learning Methods : A survey

**2019** Diagnosis of Atrial Fibrillation with Deep Auto-Encoder and LGBM

**2019** Multi-Source Domain Adaptation via Low Rank and Sparse Representation

**2018** Community Detection in weighted Networks using BIGCLAM Algorithm

**2018** Trustworthy Recommender Systems based on prevention of fake identities influence

**2018** Using users' reviews to improve the performance of Matrix Factorization in Recommender Systems

**2018** An inverse model-based multi-objective EDA using Random-Forest variable importance methods

## WORK EXPERIENCES

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### Machine Learning Expert and Data Scientist

APR 2019 – JUN 2019

[Pi Campus](#), (Rome, Italy)

My proposal has been transforming it into the text anomaly detection problem. So I've worked on custom embedding method and deep neural network architectures.

### Head of Department of AI

OCT 2017 – APR 2019

[Azad University, South Tehran Branch](#), (Tehran, Iran)

Develop and sustain appropriate structures for management, consultation, decision-making and communication with staff and students; Relationship with industry in order to obtain a research project; Ensure the highest levels of quality, integrity and ethics in all research undertaken; Deciding on which courses should be teaching in each semester and assign them to the teachers in line with faculty and university strategic plans and direction.

### Assistant professor in AI Department

FEB 2014 – PRESENT

[Azad University, South Tehran Branch](#), (Tehran, Iran)

As a faculty member of the AI department, I develop new research projects, and cooperate in existing research projects, supervise PhD and MSc students research, and teach 14 hours per week. my activity area has been machine learning, deep learning, text mining, mining of massive data and probabilistic models.

### Lecturer in Computer Eng. Department

OCT 2010 – FEB 2014

[Azad University, South Tehran Branch](#), (Tehran, Iran)

I have been teaching some of computer engineering courses including algorithm concepts, object-oriented programming, data structures, database management(SQL) and software methodology(RUP, Agile) to the bachelor students in the department of computer software engineering. Also, I've been supervising some of software development projects.

### Research Fellowship

OCT 2007 – JUN 2010

[KNTU, ISLAB](#) (Tehran, Iran)

I had been awarded two research fellowship from the Intelligence System Laboratory, KNTU, Tehran, Iran. The first research project was how to hybrid optimization algorithm to training fuzzy neural networks from 2007 till 2008. The second research project was investigating multi-objective optimization methods(2008-2010). [professor Mohammad Teshnehlab](#) led projects.

## COURSES TAUGHT

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### PhD and master's degree :

2014-present

- Machine Learning
- Deep Learning
- Natural Language Processing
- Speech Processing
- Mining of Massive Data Sets

- Advanced Artificial Intelligence (Reinforcement learning and PGM)

## Bachelor's degree :

2010-present

- Artificial Intelligence(Search, CSP, Adversarial Search, Logic Programming)
- Foundation of Programming(C / Python)
- Object-Oriented Programming(Java)
- formal language and automata theory

## TECHNICAL SKILLS

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<b>Programming Languages:</b>	Python, Java, C, C++, MATLAB, R, ProLog.
<b>Python Stack:</b>	PyTorch, Keras, TensorFlow, Gensim, NLTK, NumPy, Pandas, SiKit-Learn, SciPy, Scrappy, Matplotlib, Seaborn, ...
<b>Databases Management:</b>	SQL
<b>Writing:</b>	L <sup>A</sup> T <sub>E</sub> X, Microsoft Office, Markdown, HTML
<b>Others:</b>	AWS cloud platform, Git, GitHub, Software Development, RUP, Agile.

## HONORS & OTHER ACHIEVEMENTS

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<b>merit-based scholarship form school of AI, Rome, Italy</b>	2019
Pi Campus, Rome, Italy	
<b>Silver medal on Kaggle Competitions</b>	2017
<a href="#">Zillow's Home Value Prediction</a> , Seattle, USA	
I have achieved the rank of 71 among 3779 teams (top 2%) and got one silver medal.	
<b>Excellence in Teaching Award</b>	2014 – 2019
Azad University, Tehran, Iran	
I have got more than 18 / 20 teacher assessment score in university teacher assessment system for every semester.	
<b>Ph.D. scholarship</b>	2010
Azad University, South Tehran Branch, Tehran, Iran	
<b>Research Fellowship</b>	2008
KNTU, Intelligence System Lab, Tehran, Iran	
Multi-Objective Optimization	
<b>Research Fellowship</b>	2007
KNTU, Intelligence System Lab, Tehran, Iran	
hybrid optimization methods to train neural network and fuzzy systems	
<b>Top Rank Graduated Student in B. Sc.</b>	2005
Azad University, Iran	

## REFERENCES

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**Dr. Mojtaba Ahmadiéh khanesar**

Postdoctoral Research Fellow in [University of Nottingham](#), Nottinghamshire, United Kingdom, and Senior Member IEEE.

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**Dr. Sébastien Bratières**

Director of Artificial Intelligence at [Translated](#), Pi Campus, Rome, Italy, and member of the Machine Learning group of the Cambridge University Engineering Department.

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**Prof. Mohamad Teshnehláb**

Full Professor, K. N. Toosi University of Technology Electrical Eng. Faculty, Tehran, Iran.

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**Dr. Peyman Sheikholharam Mashhadi**

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