Mostafa **Miandari Hossein**

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Education

University of Tehran — *Tehran, Iran*
M.Sc. IN ELECTRICAL ENGINEERING - BIO-ELECTRICAL ENGINEERING — *2014 - 2017*
- GPA: 18.26 / 20 [3.82 / 4, Ranked 1st]
- Thesis Title: "Analysis and modeling of human interactive learning in a probabilistic markov environment", Advisors: Dr. Majid Nili Ahmadabadi, Dr.Bahador Bahrami

Amirkabir University of Technology — *Tehran, Iran*
B.Sc. IN ELECTRICAL & ELECTRONIC ENGINEERING — *2009 - 2014*
- GPA of Last 2 years: 17.79 / 20 [3.81 / 4]
- Thesis Title: "Prediction of objects class in visual cortex fMRI data via sparse representation", Advisor: Dr. Abolghasem Raie

Allameh Tabatabaei high school, Kargar branch — *Tehran, Iran*
DIPLOMA IN PHYSICS AND MATHEMATICS — *2005 - 2009*
- GPA: 18.66 / 20 [4 / 4]

Research Interests

⬤ Learning & Decision-making ⬤ Neuroscience ⬤ Neuroeconomics ⬤ Artificial Intelligence ⬤ Computational Psychiatry

Honors & Awards

2020	**Burton Graduate Scholarship** as an incoming student with first class academic standing.	*University of Toronto*
2020	**Doctoral Recruitment Award** as an incoming student with first class academic standing.	*University of Toronto*
2020	**Graduate Scholarship** of University of Toronto for international doctoral students.	*University of Toronto*
2019	**Graduate Scholarship** of Dartmouth College for international doctoral students.	*Dartmouth College*
2018	**Becoming a Member** of Iran's National Elites Foundation (INEF)	*Domestic*
2017	**Ranked 1st** among all graduate students of Bio-electrical Engineering in M.Sc. program, class of 2014	*University of Tehran*
2015	**Graduate Scholarship** from Cognitive Science and Technologies Council for my master thesis	*Domestic*
2014	**Ranked 98th** in nationwide M.Sc. enterance exam among more than 30,000 participants	*Domestic*
2013	**Ranked 13th** in international Data mining cup in Germany with Amirkabir U. of Tech. team	*International*
2012	**Elected with the most vote** to Electrical Engineering department Student Association of Amirkabir U.	*Amirkabir U. of Tech.*
2009	**Ranked Top 0.1%** in the nationwide university entrance exam with more than 300,000 participants	*Domestic*
2006-07	**Semifinalist** in 17th Computer National Olympiad	*Domestic*
2004-05	**Semifinalist** in 12th Astronomy National Olympiad	*Domestic*

Publications

Miandari M, Ershadmanesh S, Vahabie, A.-H, Bahrami B, & Nili Ahmadabadi, M. (in prep) Structured self-evaluation causes an increase in goal-directed learning while non-structured self-evaluation causes an increase in habitual learning

Shiravand A, Vahabie, A.-H, Miandari M, Nili Ahmadabadi, M. (in prep) Society doesn't compensate your generosity in the case of resource limitation, even if it could

Ershadmanesh, S., Miandari, M., Vahabie, A.-H., & Nili Ahmadabadi, M. (2019). Higher meta-cognitive ability predicts less reliance on over confident habitual learning system. bioRxiv, 650556

Poster presentation: Ershadmanesh, S., Miandari, M., Vahabie, A.-H., & Nili Ahmadabadi, M. (2019). The impact of meta-cognitive ability on habitual learning : the overconfident learning strategy. Symposium on Biology of Decision Making, Oxford, UK.

Work Experiences

User Insight Team- Cafe Bazaar — *Tehran, Iran*
DATA ANALYST & RESEARCHER, using data-driven and machine learning approaches to analyze Cafe Bazaar's users' behavior in its app market place and optimizing various aspects of the product to make for better and more personalized user experience. — *Feb. 2020 - Now*

People Analytics Team- Cafe Bazaar — *Tehran, Iran*
HUMAN RESOURCES Analyst, using data-driven approaches to analyze employees performance and other related metrics to help the company make better decisions for creating a more productive work environment. — *Nov. 2019 - Feb. 2020*

Cognitive System Lab - University of Tehran — *Tehran, Iran*
RESEARCHER, doing research in the field of computational cognitive science. — *Dec. 2014 - Now*

SRC Accelerator, SYNTECH Technology and Innovation Center *Qazvin & Tehran, Iran*
SENIOR DATA SCIENTIST, developing various machine learning products like recommender systems. *Dec. 2017 - Dec. 2018*

Farabi Brokerage Co. *Tehran, Iran*
DATA SCIENTIST, developing a machine learning product for stock prediction. *Sep. 2017 - Dec. 2017*

Cognitive Sciences and Technologies Council *Tehran, Iran*
CONSULTANT, presenting cognitive experiments and findings to general public to make them more familiar with cognitive distortions. *Jun. 2016 - Sep. 2016*

Tetis Co. *Tehran, Iran*
ENGINEER, developing software for sensor automation and monitoring. *Sep. 2012 - Sep. 2014*

Iranian Research Organization for Science and Technology (IROST) *Tehran, Iran*
INTERN, improving a sensory system for maintaining blood pressure in dialysis process. *Jun. 2012 - Sep. 2012*

Electrical Engineering Student Association *Tehran, Iran*
DIRECTOR OF CULTURAL AFFAIRS, organizing many different cultural events like book clubs, poetry nights and free discussions to enrich students' lives. *Jan. 2012 - Jan. 2013*

2nd Iranian Conference on Smart Grids (ICSG) *Tehran, Iran*
HEAD OF PUBLIC RELATIONS, managing the PR department of the conference. *Apr. 2012 - Jan. 2012*

Electrical Engineering Student Association - Amirkabir University of Technology *Tehran, Iran*
DIRECTOR OF FINANCE, managing the student association budget for organizing events for students. *Jan. 2011 - Jan. 2012*

Teaching Experiences

2018	**Statistical Inference** - Head Teaching Assistance, Instructor: Dr. M.R Abolghasemi-Dehaqani	*University of Tehran*
2018	**Intelligence Systems** - Head Teaching Assistance, Instructor: Dr. Abdol-Hossein Vahabie	*University of Tehran*
2018	**Dynamical Systems in Neuroscience** - Teaching Assistance, Instructor: Dr. Fariba Bahrami	*University of Tehran*
2018	**Probability and Statistics for Engineering** - Head Teaching Assistance, Instructor: Dr. M.R Abolghasemi-Dehaqani	*University of Tehran*
2018	**Human Visual System** - Teaching Assistance, Instructor: Dr. Reza Rajimehr	*University of Tehran*
2018	**Introduction to Cognitive Neuroscience** - Head Teaching Assistance, Instructor: Dr. Abdol-Hossein Vahabie	*University of Tehran*
2017	**Statistical Inference** - Head Teaching Assistance, Instructor: Dr. Behnam Bahrak	*University of Tehran*
2017	**Introduction to Cognitive Neuroscience** - Head Teaching Assistance, Instructor: Dr.M.R Abolghasemi-Dehaqani	*University of Tehran*
2017	**R for Cognitive Science Workshop** - Lecturer	*Institute for Research in Fundamental Sciences(IPM)*
2016	**Probability and Statistics for Engineering** - Teaching Assistance, Instructor: Dr. Behnam Bahrak	*University of Tehran*
2016	**Digital Image Processing** - Teaching Assistance, Instructor: Dr. Hamid Soltanian-Zadedh	*University of Tehran*
2016	**Machine Learning** - Head Teaching Assistance, Instructor: Dr. Majid Nili Ahmadabadi	*University of Tehran*
2015-2016	**Logic Circuits Lab** - Instructor	*Amirkabir U of Tech*
2015	**Machine Learning** - Teaching Assistance, Instructor: Dr. Majid Nili Ahmadabadi	*University of Tehran*
2015	**Advanced Programming** - Head Teaching Assistance, Instructor: Dr. Amir Jahanshahi	*Amirkabir U of Tech*

Projects

2019-now	**Computational modelling of humans' and rats' behavior in a reversal learning task**
	As a researcher for Dartmouth's Computational & Cognitive Neuroscience Lab in collaboration with Yale's Kwan Lab
2018-now	**Development of a novel task for studying decision-making in multidimensional environments**
	As a researcher for Cognitive System Lab.
2017-now	**Development of a novel version of third-party punishment Dictator Game for a neuroeconomic study**
	As a researcher for Cognitive System Lab.
2018	**Development of a deep Reinforcement learning system for predicting peoples' online shopping behavior**
	Developed for SYNTECH Center for a shop assistant site.
2018	**Development of a deep convolutional neural network for of matching street pictures of garments to the same item in an online shop**
	Developed for SYNTECH Center for a shop assistant site.
2017	**Development of a LSTM deep neural network for stock market prediction**
	Developed for Farabi Brokerage Co..
2017	**Development of a novel method for urban traffic forecasting based on LSTM and multifractal detrended fluctuate analysis bin Tensorflow**
	In collaboration with a data mining firm.
2016	**Development of a reinforcement learning algorithm for optimizing traffic lights in SUMO simulator and Python**
	As a researcher for Cognitive System Lab.
2016	**Evaluation of Tehran highway network efficiency using price of anarchy**
	As a researcher for Cognitive System Lab.
2015	**Modelling of CA1 pyramidal neuron using dynamical system approach in Python**
	Final project of Dynamical System in Neuroscience course, supervised by Dr. Fariba Bahrami.
2015	**Implementation of a maze solver using reinforcement learning**
	It was a personal project to learn more about reinforcement learning.

2014 **Implementation of a sparse regression classifier for EEG data using MATLAB**
It was a personal project to learn more about biological signal processing.

2013 **Pulse Metering using Infrared Sensors**
Developed using AVR microcontroller. A Project of Electronic Measurement course, Supervised by Dr. Amir Hossein Rezaie.

Selected Courses

M.Sc. Courses:
- Introduction to Cognitive Neuroscience (20 / 20)
- Statistical Inference (19.6 / 20)
- Estimation & System Identification (19.5 / 20)
- Biological modelling (19 / 20)
- physiology II (19 / 20)
- Machine Learning (18 / 20)
- Dynamical Systems in Neuroscience (17 / 20)
- physiology I (17 / 20)

B.Sc. Courses:
- Electronic Measurement (20 / 20)
- Data Mining (19.5 / 20)
- Advanced Computer Programming (19 / 20)
- Programmable Logic Circuits(18.5/ 20)
- Algorithm Design (17.75 / 20)
- Digital Image Processing(17.5 / 20)
- Multimedia Systems (17 / 20)
- Cognition & Brain Physiology(17 / 20)

Skills

Programming	★ Python, MATLAB
	★ R, VHDL, G, SQL
	★ Java, C, C++, Assembly
Specialized Software/ibraries	★ PyCharm, MathWorks MATLAB
	★ Keras, Tensorflow, PySpark, LabVIEW
	★ Altium Designer
Hardware	★ Raspberry Pi
	★ FPGA, AVR
	★ ARM
Languages	Persian [Native]
	English [Fluent], **TOEFL: 102** (R: 29, L: 29, S: 24, W: 20), **GRE** (Q: 164, V: 163)
	German [Very Basic]

Hobbies

● Thinking ● Reading ● Swimming ● Hiking ● Meditation ● Pencil Painting ● Running

References

Dr. Bahador Bahrami
HUMBOLDT SENIOR FELLOW - DEPARTMENT OF GENERAL AND EXPERIMENTAL PSYCHOLOGY - LUDWIG MAXIMILIAN UNIVERSITY

- ✉ bahador.bahrami@psy.lmu.de

Dr. Abdol-Hossein Vahabie
SENIOR RESEARCH FELLOW - SCHOOL OF COGNITIVE SCIENCE - INSTITUTE FOR RESEARCH IN FUNDAMENTAL SCIENCES (IPM)

- ✉ vahabi@ipm.ir

Dr. Reza Rajimehr
RESEARCH SCIENTIST - MRC COGNITION AND BRAIN SCIENCES UNIT - UNIVERSITY OF CAMBRIDGE

- ✉ reza.rajimehr@mrc-cbu.cam.ac.uk

Dr. Fariba Bahrami
ASSOCIATE PROFESSOR - SCHOOL OF ELECTRICAL AND COMPUTER ENGINEERING - UNIVERSITY OF TEHRAN

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Dr. Majid Nili Ahmadabadi
PROFESSOR - SCHOOL OF ELECTRICAL AND COMPUTER ENGINEERING - UNIVERSITY OF TEHRAN

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ASSISTANT PROFESSOR - DEPARTMENT OF PSYCHOLOGICAL AND BRAIN SCIENCES - DARTMOUTH COLLEGE)

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