

Mohammadamin Nejatbakhsheshfahani

Curriculum Vitae

+98 (912) 805 5567
✉ nejatbakhsh.amin@gmail.com
✉ nejatbakhsh@ce.sharif.edu
✉ nejatbakhsh@ipm.ir
🏠 ce.sharif.edu/~nejatbakhsh

EDUCATION

- 2011–2016 **B.Sc. in Computer Engineering, Minor in Pure Mathematics,**
Sharif University of Technology.
- Thesis: Design and implementation of a voice recognition system based on the rat's auditory system, under the supervision of Prof. M. Soleymani-Baghshah (19.8/20).
 - GPA: 17.07/20 (3.6/4)
- 2007–2010 **Diploma in Physics and Mathematics Discipline,**
Allameh Tabatabaei High school.

FIELDS OF INTEREST

Computational and Systems Neuroscience.
Executive Functions, Sensorimotor Processing.
Machine Learning and Neural Networks.

RESEARCH EXPERIENCE

- Current **Data Analyst.**
- Analyzed LFP and spike data to find regions in the brain that are encoding reward, risk, and uncertainty. Co-supervised by Prof. J. Gottlieb (Columbia University) and Prof. R. Lashgari.
- 2015–Now **Research Assistant in Brain Engineering Research Center at IPM.**
- Designed and implemented an experimental design and data collection system (more info).
 - Ran a distributed computing system on the computers in the lab for parallel computing.
 - Analyzed LFP signals to cluster V1 neurons.

HONORS AND AWARDS

- 2015 **Gold Medal**, in *22nd International Mathematical Competition (IMC)*, Blagoevgrad.
- 2015 **Gold Medal**, in *39th Iranian Mathematical Society Competition (IMS)*, Yazd.
- 2014 **Ranked 3/7**, in *13th International German Open Robocup*, Magdeburg.
- Member of Paaydar Team in 3D Soccer Simulation League.
- 2014 **Ranked 2/6**, in *3rd National Sharifcup Competition*, Tehran.
- Leader of Paaydar Team in Traffic Control League.
- 2013 **Ranked 9-16/32**, in *17th International Robocup*, Eindhoven.
- Member of Paaydar Team in 3D Soccer Simulation League.
- 2010 **Gold Medal**, in *28th Iranian National Mathematical Olympiad (INMO)*, Tehran.
- 2009 **Silver Medal**, in *27th Iranian National Mathematical Olympiad (INMO)*, Tehran.

TEACHING EXPERIENCE

- Spring 2016 & Fall 2015 **Teaching Assistant for Engineering Probability and Statistics**,
Instructor: Prof. H. Rabiee.
- Fall 2015 **Teaching Assistant for Modern Information Retrieval**,
Instructor: Prof. M. Soleymani-Baghshah.
- Spring 2013 **Teaching Assistant for Linear Algebra**,
Instructor: Prof. A. Ranjbar-Motlagh.
- Summer 2015 **Instructor of iOS Application Development Workshop**.
- 2009–Now **Instructor of Mathematical and Informatics Olympiad**.

WORKING EXPERIENCE

- Fall 2015 **Employee of Software Development**, *Torob Company*.
 - Developed an automatic feature extraction and clustering system (Python, sickit-learn)
- 2012–2014 **Employee of Mobile Application Development**, *Hasin Company*.
 - Developed Taaghche and Gramophone iOS Applications (Objective-C)

RELATED ATTENDED COURSES

- Medical Neuroscience**, *Coursera: Duke University (Prof. Leonard E. White)*.
- Biomath**, *Sharif University of Technology (Prof. A. Abbasian)*.
- Neuroscience**, *Sharif University of Technology (Prof. R. Lashgari)*.
- Synapses, Neurons and Brains**, *Coursera: Hebrew University (Prof. Idan Segev)*.
- Computational Neuroscience**, *Coursera: University of Washington (Prof. R. Rao)*.
- Machine Learning**, *Sharif University of Technology (Prof. H. Rabiee)*.
- Modern Information Retrieval**, *Sharif University of Technology (Prof. M. Soleymani)*.
- Machine Learning**, *Coursera: Stanford University (Prof. Andrew Ng)*.

PROFESSIONAL DEVELOPMENT

- Fall 2016 **Three-day Hands-on fMRI Workshop**.
 - The common preprocessing and analysis methods on structural and functional MRI data using Freesurfer application was covered by Dr. M. Vaziri and Dr. R. Rajimehr.
- Fall 2016 **Two-week International IBRO School on Brain Mapping**.
 - Physics, theories, technologies, and analysis of brain imaging techniques such as fMRI, EEG, fNIRS, TMS, and tDCS was covered by instructors such as Prof. R. Savoy, Prof. N. Muggleton.
- Spring 2016 **Three-day Stereology Course**.
 - The three-dimensional interpretation (such as the computation of the volume or finding neurons and synapses) of two-dimensional cross sections of brain tissue was covered by Prof. J. Nyengaard.
- 2015–Now **Weekly Computational Neuroscience Journal Clubs**.
 - Weekly paper reading sessions was held at IPM by Prof. A. Abbasian in which a wide range of the theories in computational neuroscience such as predictive coding theory, graph theory, topology, point process, and dynamical systems were discussed.

TEST SCORES

- 11/29/2015 **Scored 99 in TOEFL iBT Exam**,
Reading (27/30), Listening (21/30), Speaking (24/30), Writing (27/30).
- 12/06/2016 **GRE General Exam**,
Verbal (149/170 - 42%), Quant (170/170 - 97%), A/W (3.5/6 - 42%).

PROFESSIONAL SKILLS

Neuroscience Fieldtrip, Freesurfer, Psychtoolbox, Brian SNN Simulator
Programming Python, Matlab, Java, C, C++, Javascript, Prolog, Objective-C, Verilog
Web Django, NodeJS, CSS, HTML
Typesetting \LaTeX , Microsoft Office

LANGUAGES

Persian Native
English Fluent
Azerbaijani Familiar

EXTRACURRICULAR ACTIVITIES

Spring 2015 **Gold Medal**, in Sharif University Basketball Championships Competition.
Fall 2014 **Technical Staff**, in Association Computing Machinery (ACM-ICPC) Competition.
2011–Now Member of Sharif University Mountain Climbing Group