

Ghazal Sahebzamani

Education

- 2013–Present **B.Sc in Electrical Engineering, Biomedical Engineering sub-branch, [School of Electrical and Computer Engineering, University of Tehran](#)**, Tehran, Iran.
Expected Graduation Date: December 2017
GPA: 3.83/4 (17.95/20)
- 2008–2012 **High School Diploma and Pre-University Degree in Physics and Mathematics, Farzanegan 3 High School, under supervision of NODET (the National Organization for Developing Exceptional Talents)**, Tehran, Iran.
Diploma GPA: 19.73/20 **Pre-University GPA: 19.75/20**

Research Interests

- Neuroscience and Cognitive Neuroscience
- Signal and Image Processing
- Machine Learning, Deep Learning, and Pattern Recognition
- Bioinformatics

Honors and Memberships

- 2013–2017
 - Ranked 15th (**among top 10%**) out of 150 undergraduate students, [School of Electrical and Computer Engineering, University of Tehran](#)
- 2016
 - Eligible for **Exemption from M.Sc. Entrance Exam** in Iran as an exceptionally talented student
- 2016
 - Member of [Student Branch of Iranian Association of Biomedical Engineers, University of Tehran](#)
- 2016
 - Appreciated for musical activities with **University of Tehran's Classical Orchestra**
- 2013
 - Ranked 208th out of more than 500,000 participants in the nationwide university entrance exam ("Konkoor")
- 2008–2012
 - Ranked 1st among Farzanegan 3 high school and pre-university students
- 2011
 - Qualified for the final round of the national Physics Olympiad

Technical Skills

Programming Languages

Expert in: MATLAB, C/C++

Acquainted with: Python, HTML

Special
Libraries and
Toolboxes

- EEGLAB *Application*: EEG signal processing *Space*: MATLAB
- Brian *Application*: Spiking neural networks simulation *Space*: Python
- Qt *Application*: Software interface design *Space*: C++
- Psychtoolbox *Application*: Controlled stimuli design for psychophysical tasks *Space*: MATLAB
- NS-3 *Application*: Discrete-event computer network simulation *Space*: C++

Hardware Programming

Verilog, Arduino, AVR

Simulation Softwares

Multisim, PSpice, Proteus,
Quartus II, Wireshark

Visual Programming and System Design

LabVIEW, SIMULINK

Typesetting

LaTeX

Operating Systems

Linux (Ubuntu),
Windows

Research Experience and Notable Projects

Research Assistantship

- Description ○ An institutional team project to analyze brain connectivity based on EEG data in children diagnosed with Autism using MATLAB and EEGLAB (**Ongoing Project**)
- Supervisor: Prof. Hossein Ahmadi Noubari Associates: Shohadaye Tajrish Hospital
- Description ○ Synchronizing data acquisition of multiple devices (a robot, a camera and EMG data acquisition program) using LABVIEW and MATLAB as an **internship project** in *Human Motor Control and Computational Neuroscience Lab*, University of Tehran
- Supervisor: Dr. Fariba Bahrami Bode Lalo

Selected Projects

- Ongoing** ○ **Bachelor Thesis Project:** Classification and detection of epileptic patients using MRI images of the brain *Supervisor:* Prof. Hamid Soltanian Zadeh
- Spring 2017 ○ Processing of EEG data acquired during a memory guided saccade task including time and frequency analysis, statistical analysis, and classification using MATLAB *Instructor:* Dr. Mohammad Abolghasemi Dehaghani *Course:* Introduction to Cognitive Neuroscience
- Summer 2015 ○ Processing, feature extraction, and classification of EEG signals during arm movement using EEGLab and MATLAB, **Sandcastle Summer Contest**, University of Tehran *Supervisor:* Dr. Fariba Bahrami Bode Lalo
- Spring 2017 ○ Neural spiking activity processing and classification using MATLAB *Instructor:* Dr. Mohammad Abolghasemi Dehaghani *Course:* Introduction to Cognitive Neuroscience
- Fall 2017 ○ Design and implementation of a simplified version of the "Trello" website for collaboration and teamwork management involving socket programming using C++ and graphical interface design using Qt *Instructor:* Dr. Mohammad Amin Sadeghi *Course:* Advanced Programming
- Spring 2016 ○ Analysis of the training process during a balance maintenance task on an equilibrium board involving a camera data and EMG signal processing using MATLAB *Instructor:* Dr. Fariba Bahrami Bode Lalo *Course:* Principles of Rehabilitation and Equipment
- Spring 2016 ○ Creating a game joystick using data from a gyroscope sensor, an Arduino board and C++ *Instructor:* Prof. seyed kamal AL ddin Setarehdan *Course:* Introduction to Biomedical Engineering
- Fall 2015 ○ Design and implementation of a control system for regulating movements of a path finder robot using MATLAB *Instructor:* Dr. Aras Adhami-Mirhosseini *Course:* Linear Control Systems
- Spring 2015 ○ Design and implementation of a digital oscilloscope using Altera-DE0 FPGA boards *Instructor:* Prof. Zainalabedin Navabi *Course:* Digital Logic Design Lab
- Fall 2013 ○ Implementation of a secure file system library modelling the main memory of a computer (RAM) using C *Instructor:* Dr. Manouchehr (Hadi) Moradi Sabzevar *Course:* Introduction to Computer Systems and Programming

Teaching Assistantship

- Fall 2017 ○ Microprocessor *Instructor:* Dr. Omid Fatemi
- Spring 2017 ○ Electrical Circuits II *Instructor:* Dr. Farrokh Aminifar and Dr. Amir Abbas Shayegani Akmal
- Fall 2016 ○ Engineering Probability and Statistics *Instructor:* Dr. Amir Masoud Rabiei
- Spring 2016 ○ Electrical Circuits and Measurement Laboratory *Instructor:* Dr. Hossein Imaneni
- Spring 2016 ○ Engineering Mathematics *Instructor:* Dr. Mojtaba Dehmollaian
- Fall 2015 ○ Introduction to Computing Systems and Programming *Instructors:* Dr. Manouchehr (Hadi) Moradi Sabzevar and Dr. Mahmoud Reza Hashemi
- Fall 2015 ○ Engineering Probability and Statistics *Instructor:* Dr. Behnam Bahrak

Relevant Courses

19/20	○ Cognitive Neuroscience (graduate course taken voluntarily)	16/20	○ Radiology Systems (2nd grade of the class)
Instructor	Dr. Mohammad Abolghasemi Dehaghani	Instructor	Prof. Hamid Soltanian Zadeh
18/20	○ Advanced Programming	18/20	○ Principles of Rehabilitation and Equipment
Instructor	Dr. Mohammad Amin Sadeghi	Instructor	Dr. Fariba Bahrami
20/20	○ Introduction to Biomedical Engineering	20/20	○ Engineering Mathematics
Instructor	Prof. seyed kamal AL ddin Setarehdan	Instructor	Prof. Mahmoud Mohammad Taheri
18/20	○ Linear Control Systems	17.6/20	○ Engineering Probability and Statistics
Instructor	Dr. Aras Adhami-Mirhosseini	Instructor	Dr. Hamed Kebriaei
17.6/20	○ Signals and Systems	18/20	○ Introduction to Computing Systems and Programming
Instructor	Dr. Amir Masoud Rabiei	Instructor	Dr. Manouchehr(Hadi) Moradi Sabzevar

Language Skills and Standardized Tests

Persian (Native), English (Fluent)

TOEFL iBT **108** - Reading 28, Listening 28, Speaking 24, Writing 28

GRE (going to take in fall)