

# Ghazal Sahebzamani

## Curriculum Vitae

### 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 and Pre-University Diploma 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

### Honors and Memberships

- 2013–2017 ○ Ranked 15<sup>th</sup> (**among top 10%**) out of 150 undergraduate students, School of Electrical and Computer Engineering,
- 2016 ○ Eligible for **Exemption from M.Sc. Entrance Exam** in Iran as an exceptionally talented student
- 2016 ○ Member of *University of Tehran's Biomedical Engineering Student Branch*
- 2016 ○ Appreciated for musical activities with **University of Tehran's Classical Orchestra**
- 2013 ○ Ranked 208<sup>th</sup> out of more than 500,000 participants in the nationwide university entrance exam ("*Konkoor*")
- 2008–2012 ○ Ranked 1<sup>st</sup> 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

#### Visual Programming and System Design

LabVIEW, SIMULINK

#### Simulation Softwares

Multisim, PSpice, Proteus, Quartus II, Wireshark

#### Typesetting

LaTeX

#### Operating Systems

Linux (Ubuntu),  
Windows

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## 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 *Instructor:* [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
- Spring 2017 ○ Processing, feature extraction and classification of EEG signals during arm movement using EEGLab and MATLAB, **Sandcastle Summer Contest**, University of Tehran *Instructor:* [Dr. Fariba Bahrami Bode Lalo](#)
- Summer 2015 ○ 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 using C++ and Qt *Instructor:* [Dr. Mohammad Amin Sadeghi](#) *Course:* Advanced Programming
- 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
- 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
- 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

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

## Languag Skills and Standardized Tests

Persian (Native), English (Fluent)

TOEFL iBT 102- Reading 28,Listening 27, Speaking 20, Writing 27 (going to retake)

GRE (going to be taken in fall)