*School of Electrical and Computer Engineering,*
*University of Tehran,*
*Tehran,*
*Iran*
*+989389385998*
*+982122722482*
*ghazal.sahebzamani@gmail.com*
*ghazalsahebzamani.github.io*
*Skype:ghazal_l.a.m*

# 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 $15^{th}$ **(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 $208^{th}$ 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, Quartes 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 acqusition of multiple devices (a robot,a camera and EMG data acqusition 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 analyisis, 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 Labratory *Instructor:* Dr. Hossein Imaneini

Spring 2016
- Engineering Mathematics *Instructor:* Dr. Mojtaba Dehmollaian

Fall 2015
- Introducion 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 volunteerly)**
Instructor Dr. Mohammad Abolghasemi Dehaghani

18/20 ○ Advanced Programming
Instructor Dr. Mohammad Amin Sadeghi

20/20 ○ Introduction to Biomedical Engineering
Instructor Prof. seyed kamal AL ddin Setarehdan

18/20 ○ Linear Control Systems
Instructor Dr. Aras Adhami-Mirhosseini

17.6/20 ○ Signals and Systems
Instructor Dr. Amir Masoud Rabiei

16/20 ○ Radiology Systems **($2^{nd}$ grade of the class)**
Instructor Prof. Hamid Soltanian Zadeh

18/20 ○ Principles of Rehabilitation and Equipment
Instructor Dr. Fariba Bahrami

20/20 ○ Engineering Mathematics
Instructor Prof. Mahmoud Mohammad Taheri

17.6/20 ○ Engineering Probability and Statistics
Instructor Dr. Hamed Kebriaei

18/20 ○ Introduction to Computing Systems and Programming
Instructor Dr. Manouchehr(Hadi) Moradi Sabzevar

## Languag Skills and Standardized Tests

Persian (Native), English (Fluent)

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

GRE Verbal Reasoning 152, Quantitative Reasoning 166, Analytical Writing : not availabe yet