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

GRE **(**going to take in fall)