

# Menoua KESHISHIAN

## PERSONAL DATA

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## RESEARCH INTERESTS

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Theoretical Neuroscience                      Artificial Intelligence  
Neuromorphic Engineering                      Machine Learning

## EDUCATION

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2012–2017 Bachelor of Science in ELECTRICAL ENGINEERING  
**Sharif University of Technology**, Tehran, Iran  
Major: Electronics | Minor: Computer Science  
Thesis: “ALM and Deep Learning Comparison” | Advisor: Prof. BAGHERI SHOURAKI  
CUMULATIVE GPA: 17.3/20 | JUNIOR & SENIOR YEARS: 18.2/20

## HONORS AND AWARDS

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2011–PRESENT Received fellowship of the National Elites Foundation  
SUMMER 2011 Bronze medal in the National Computer Olympiad of Iran  
SUMMER 2012 33<sup>rd</sup> place in Iran’s Nationwide University Entrance Exam (260,000 participants)  
SUMMER 2013 1<sup>st</sup> place in the 2nd Sharif Cup open robotics competition (Multitask Robots)  
SUMMER 2014 3<sup>rd</sup> place in the 3rd Sharif Cup open robotics competition (Machine Vision)

## RESEARCH EXPERIENCE

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*Current* | Research Assistant at BRAIN ENGINEERING CENTER  
OCTOBER 2016 | Institute for Research in Fundamental Sciences (IPM), Tehran  
Research Advisor: **Dr. Reza Lashgari**

## SELECTED COURSES

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### Undergraduate

Discrete Mathematics	19	Linear Algebra	19
Advanced Programming	20	Data Structures	20
Language & Automata Theory	20	Compiler	20
FPGA/ASIC Systems Design	20	Microprocessors	20

### Graduate

Artificial Neural Networks	16.4	IC Design Lab	18.5
Systems Biology	(current)	Fuzzy Systems	(audit)
Introduction to Cryptography	(current)		

## TEST SCORES

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TOEFL: 113; Reading: 30, Listening: 30, Speaking: 26, Writing: 27  
GRE: 325; Verbal: 157 (75<sup>th</sup>%), Quantitative: 168 (95<sup>th</sup>%), Writing: 4.5 (82<sup>nd</sup>%)

## TEACHING EXPERIENCE

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- FALL 2016 **Advanced Programming**, Designing new lab experiments, Prof. M. Hashemi  
SPRING 2016 **Principles of Electronics**, Head Teaching Assistant, Prof. M. Fakharzadeh  
SPRING 2016 **Advanced Programming**, Teaching Assistant, Prof. M. Hashemi  
SPRING 2016 **Computer Architecture**, Lab Assistant, Prof. M. Hashemi  
FALL 2015 **Principles of Electronics**, Lab Assistant, Prof. M. Fakharzadeh  
SPRING 2015 **Principles of Electronics**, Lab Assistant, Prof. M. Fakharzadeh

## COMPUTER SKILLS

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- Scientific Computation: MATLAB, R, julia  
Circuit Design/Simulation: VERILOG, PROTEUS, PSPICE, HSPICE, Quartus, XILINX ISE, Modelsim  
Layout Software: Cadence, Synopsys Design Compiler, Altium Designer  
Programming Languages: C, C++, Java, Scala, Python, Android, Assembly (x86, MIPS, AVR)  
Operating Systems: Microsoft Windows, GNU/Linux (Arch Linux), Mac OS X  
Also familiar with: L<sup>A</sup>T<sub>E</sub>X, OpenCV, HTML, PHP, Perl, Ruby, C#

## ACADEMIC PROJECTS

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- B.Sc. Thesis (Ongoing) Comparison of the classification capabilities of ALM fuzzy algorithm and Deep Learning methods, under supervision of Prof. Bagheri Shouraki
- Neural Networks Developed a Multilayer Perceptron for age/gender recognition from face  
Developed a Convolutional Neural Network for Persian digits recognition
- Operating Systems Developed a Custom Shell for Linux, using C
- Adv. Programming Developed a Database Management System with desktop, web and Android interfaces, using Java
- Microprocessors Developed a Digital Oscilloscope using ARM Cortex-M3  
Developed a MATLAB-like program in 8086 assembly
- Pulse Technique Designed and implemented a function generator with square, triangular and sinusoidal outputs in 1-100 KHz frequency range
- Programming Developed the board game “Go”, using C++
- Computer Arch. Designed and Implemented a Digital Voltmeter using a 8051  $\mu$ C

## EXTRACURRICULAR ACTIVITIES

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- SUMMER 2015 Participated in holding workshop on OpenCV, Sharif University of Technology

## WORKSHOPS AND SEMINARS

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- DEC 2015 Attended the 4th Basic and Clinical Neuroscience Congress 2015  
– Razi Conference Hall, Iran University of Medical Sciences, Tehran, Iran
- AUG 2015 Attended mini-workshop on Computational Neuroscience  
– “Frontiers in Mathematical Sciences”, Sharif University of Technology
- MAY 2015 Attended workshop on RF receiver and frequency synthesizer design  
– by Dr. Behzad Razavi, ICEE 2015, Sharif University of Technology

## LANGUAGES

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- ARMENIAN: Native      PERSIAN: Native      ENGLISH: Fluent      GERMAN: Beginner