

Ali Gholami

CONTACT INFORMATION	Computer Eng. Dept., Amirkabir University of Technology Hafez St., Tehran, Iran	Voice: (+98) 939 6191 804 Email: hexpheus@gmail.com https://hexpheus.github.io
EDUCATION	Amirkabir University of Technology , Tehran, Iran <i>B.Sc. in Software Engineering</i> • Advisor: Mohammad Rahmati • Overall GPA: 17.55/20 (3.65/4.00) Kamal Highschool , Tehran, Iran <i>Diploma in Mathematics & Physics</i> • Overall GPA: 19.58/20	Oct. 2014 – Present Oct. 2012 – Jun. 2014
RESEARCH INTERESTS	<ul style="list-style-type: none">• 3D Scene Reconstruction• Image Style Transfer• Deep Visual Explanation	<ul style="list-style-type: none">• Visual Question Answering• Image Captioning• Medical Image Analysis
RESEARCH EXPERIENCE	Sharif University of Technology , Bio-intelligence Center <i>Research Assistant</i> • Advisor: Ali Ghazizadeh • Project: Lesion Localization and Segmentation in Medical Images Amirkabir University of Technology , Statistical Pattern Recognition <i>Research Scientist</i> • Advisor: Mohammad Rahmati • Project: Real-time Face Recognition with Maximum Likelihood ANN Method Amirkabir University of Technology , Multi-core Programming <i>Research Scientist</i> • Advisor: Mahmoud Momtazpour • Project: Image Template Matching with <i>CUDA</i> Technology Amirkabir University of Technology , Technical Research & Presentation <i>Research Scientist</i> • Advisor: Reza Safabakhsh • Project: Visual Question Answering with Convolutional & Recurrent Neural Networks	Jun. 2018 – Present Sep. 2017 – Jun. 2018 Sep. 2017 – Jun. 2018 Sep. 2017 – Jun. 2018
WORK EXPERIENCE	ArvanCloud , Tehran, Iran <i>Web Development Internship</i> • Developed an administrative panel for an smart lock system using PHP and Laravel. Fandogh , Tehran, Iran <i>Android Development Internship</i> • Design & implementation of a weather forecast application with <i>Java SE</i> & <i>Android Studio</i> . • Development of a poetry application with <i>React Native</i> .	Jun. 2017 – Sep. 2017 Jun. 2017 – Sep. 2017

HONORS & AWARDS	Ranked top 10 Among the Class of 2014, Department of Computer Engineering, Amirkabir University of Technology.	Aug. 2018
	Ranked top 3 Among the Most Active GitHub Developers in Iran. (Based on https://commits.top/iran.html)	Jul. 2018
	Admitted to the Class of 2014, Department of Computer Engineering, Amirkabir University of Technology.	Oct. 2016
	Ranked top 3 Among the Class of 2014, Department of Computer Engineering, Kharazmi University of Tehran.	Aug. 2016
	Ranked top 0.6% in the Nationwide University Entrance Exam, Among all Students (Approx. 270,000) in Mathematics & Physics.	Jul. 2014
	Elected as the Tidiest Student at the Campus of International Summer School, <i>Institute Monte Rosa</i> , Montreux, Switzerland .	Jun. 2012
PROGRAMMING LANGUAGES	Languages: <i>Python, C/C++, Java SE, VHDL, ARM Assembly, AVR Assembly, Racket, ML, Scheme, HTML/CSS, Javascript, Latex.</i>	
	Frameworks and Environments: <i>Keras, Tensorflow, Numpy, Matplotlib, Pandas, RapidMiner, Weka, OpenMP, CUDA, React Native, Node.js, Laravel.</i>	
	Databases: <i>MongoDB, MySQL, PostgreSQL.</i>	
TEACHING EXPERIENCE	Teaching Assistant , Amirkabir University of Technology <i>Microprocessors and Assembly Language</i> • Advisor: Mohammad Mehdi Homayounpour	Sep. 2017 – Dec. 2017
	Teaching Assistant , Kharazmi University of Tehran <i>Foundations of Programming</i> • Advisor: Azadeh Mansouri	Sep. 2015 – Dec. 2015
SELECTED COURSES	Pattern Recognition: 17/20	Machine Learning: 19.5/20
	Data Mining: 18.7/20	Technical Research: 17.6/20
	Data Structures: 18.5/20	Algorithm Design: 19.31/20
	Engineering Statistics: 18.5/20	Engineering Mathematics: 19/20
ENGLISH PROFICIENCY	TOEFL: <i>Registered to take the test on October 14.</i>	
	TOEFL: <i>Test score for August 4th: 91 (20/25/22/24)</i>	
TECHNICAL REPORTS	A. Gholami , "Real-time Face Recognition Based on the Maximum Likelihood Approximate Nearest Neighbor Method," Faculty of Computer Engineering, Amirkabir University of Technology, Tehran, Iran, Statistical Pattern Recognition Final Project Report, Jul. 2018.	
	A. Gholami , "Implementation of A Naive Template Matching Algorithm with CUDA Technology," Faculty of Computer Engineering, Amirkabir University of Technology, Tehran, Iran, Multi-core Programming Final Project Report, Apr. 2018.	

A. Gholami, " *Linear Discriminant Functions, Support Vector Machine and Unsupervised Learning*," Faculty of Computer Engineering, Amirkabir University of Technology, Tehran, Iran, Statistical Pattern Recognition Coursework Report, Jun. 2018.

A. Gholami, " *Dimensionality reduction strategies; Principal Component Analysis, Fisher Linear Discriminant and Feature Subset Selection*," Faculty of Computer Engineering, Amirkabir University of Technology, Tehran, Iran, Statistical Pattern Recognition Coursework Report, Feb. 2018.

A. Gholami, " *Parametric and Non-parametric methods; Maximum Likelihood and Bayesian Parameter Estimation and Kernel Density Estimation*," Faculty of Computer Engineering, Amirkabir University of Technology, Tehran, Iran, Statistical Pattern Recognition Coursework Report, Jan. 2018.

A. Gholami, " *Analysis of Bayesian Decision Boundaries, Risk Minimization and Bayes Error Bounds*," Faculty of Computer Engineering, Amirkabir University of Technology, Tehran, Iran, Statistical Pattern Recognition Coursework Report, Dec. 2017.

More available on <https://hexpheus.github.io/publications>.

NOTABLE PROJECTS

Implementation of the SimpNet convolutional neural network architecture in Python & Tensorflow.

Implementation of a real-time face recognition system based on the maximum likelihood approximate nearest neighbor method in Tensorflow & OpenCV.

Implementation & optimization of a fast naive image template matching in CUDA.

Implementation of the AlexNet convolutional neural network architecture in Tensorflow.

Implementation of 1D & 2D kernel density estimation & visualization in Python.

Implementation of a pure functional programming language interpreter in Racket.

Implementation of a wireless network using nRF24L01 and Arduino UNO.

Implementation of the histogram equalization algorithm on the STMF32F407VGT6 with ARMv4T architecture using ARM assembly.

Co-design of a smart parking system in VHDL and C.

Implementation of a weightless neural network library in Python. (ongoing)

More available on <https://github.com/hexpheus>.

REFERENCES

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