

Ali Gholami

COMPUTER ENGINEERING & INFORMATION TECHNOLOGY DEPARTMENT
AMIRKABIR UNIVERSITY OF TECHNOLOGY
[aligholamee\[at\]aut\[dot\]ac\[dot\]ir](mailto:aligholamee[at]aut[dot]ac[dot]ir)
ceit.aut.ac.ir/~aligholamee
github.com/aligholamee

EDUCATION	B.S. Computer Engineering @ AMIRKABIR UNIVERSITY OF TECHNOLOGY [Global Rank of 97 in CE] @ USNEWS <u>GPA: 3.6/4</u> [National Rank of 2] @ ARWU
	Mathematics & Physics Diploma @ KAMAL HIGHSCHOOL <u>GPA: 19/20</u>
RELATED COURSES	Machine Learning @ AMIRKABIR UNIVERSITY OF TECHNOLOGY Computer Vision @ UDACITY Deep Learning @ UDACITY cs231n @ STANFORD UNIVERSITY
RESEARCH EXPERIENCE	CEIT @ AMIRKABIR UNIVERSITY OF TECHNOLOGY Dec 2018 – Present <i>Computer Vision — Pattern Recognition</i> <ul style="list-style-type: none">• Implementation of <i>AlexNet CNN</i> architecture using <i>Tensorflow</i>.• Implementation of a <i>DCGAN</i> to draw <i>MNIST</i> characters using <i>Tensorflow</i>.• Implementation of a <i>Variational Autoencoder</i> using <i>Tensorflow</i>.• Implementation of various <i>Deep Learning</i> techniques using <i>Tensorflow</i>.
TECHNICAL REPORTS	Design & Implementation of Programming Languages <i>Advisor: Prof. Mehran S. Fallah – [docs]</i> Machine Learning <i>Advisor: Prof. Mohamad E. Shiri – [docs]</i> Microprocessors & Assembly Programming <i>Advisor: Prof. Mahdi Hodayounpour – [docs]</i>
WORK EXPERIENCE	Internship @ ARVAN CLOUD Jun – Sep 2017 <i>Web Application Development</i> <ul style="list-style-type: none">• <i>HTML, CSS, PHP, Laravel, Javascript, ECMAScript, Node.js, Vue.js, React.js</i> Internship @ FANDOGH Jun – Aug 2017 <i>Mobile Application Development</i> <ul style="list-style-type: none">• <i>Java, React Native</i>

TEACHING EXPERIENCE	T.A. @ CEIT @ AMIRKABIR UNIVERSITY OF TECHNOLOGY <i>Microprocessors & Assembly Programming</i> <i>Advisor: Prof. Mahdi Homayounpour</i>	Sep – Dec 2017
	T.A. @ ENG @ KHARAZMI UNIVERSITY OF TEHRAN <i>Foundations of Programming in C++</i> <i>Advisor: Dr. Azadeh Mansouri</i>	Sep – Dec 2015
TALKS	Machine Learning at Scale <ul style="list-style-type: none"> Based on the paper <i>Rules of Machine Learning</i> by Dr. Martin Zinkevich. 	Oct 2017
	Energy Awareness <ul style="list-style-type: none"> Based on the paper <i>Energy-aware adaptation for mobile applications</i> by Dr. Jason Flinn. 	July 2017
	Metasploit Framework <ul style="list-style-type: none"> Introduction to <i>Metasploit Framework & Social Engineering</i> techniques. 	May 2017
HONORS	Admitted to Amirkabir University of Technology among all bachelor students at Computer Engineering Department, Kharazmi University of Tehran.	Aug 2018
	Ranked top 3 among all bachelor students at Computer Engineering Department, Kharazmi University of Tehran.	July 2016
	Ranked top 0.006 in the Nationwide University Entrance Exam among all students in Mathematics and physics (approximately 250,000).	July 2014
SKILLS	Languages Persian (<i>native</i>), English (<i>advanced working proficiency</i>)	
	Programming Python, VHDL, C/C++, Java, ARM Assembly, AVR Assembly, Javascript, HTML/CSS, \LaTeX , Racket, ML, Scheme.	
	Tools & Platforms Tensorflow, scikit-learn, Numpy, Pandas, Matplotlib, Weka, Arduino, ARM, AVR, CodeVision, Xilinx Vivado, ModelSim, Atmel Studio, Cadence PSpice, Keil, Dr. Racket, MongoDB, PostgreSQL, MySQL, Visual Studio, TeXstudio.	
NOTABLE PROJECTS	MNIST-Drawer , Variational Autoencoder <ul style="list-style-type: none"> Implementation of a Variational Autoencoder to draw MNIST dataset characters using Tensorflow. [code] 	
	notMNIST , Convolutional Neural Network <ul style="list-style-type: none"> Implementation of multiple machine learning classifiers and regularization techniques on the notMNIST dataset using Tensorflow. [code] 	
	Freeman , Hardware Programming & Co-design	

- Implementation of a *Parking Controller & Security Controller* using *VHDL*. [\[code\]](#)

Numex, *Functional Programming*

- Implementation of an *Advanced Functional Interpreter* using *Racket*. [\[code\]](#)

Hornburg, *Deep Learning Basics*

- Implementation of *Principal Machine Learning Algorithms* using *Python*. [\[code\]](#)

Iris, *Multi-nomial classification*

- Multi-nomial classification of *Iris* dataset using *scikit-learn*. [\[code\]](#)

ARMHE, *Advanced RISC Machine Programming*

- Implementation of the *Histogram Equalization* algorithm on the *STMF32F407VGT6* with *ARMv4T* architecture using *ARM Assembly*. [\[code\]](#)

Cinder, *Low Level Programming*

- Implementation of a basic *Operating System* with *C*. [\[code\]](#)

Sockets, *Socket Programming*

- Implementation of various types of *Sockets* in *Interprocess Communication & TCP/IP Protocol* with *C*. [\[code\]](#)

Toofan, *Android Application Development*

- Implementation of a *Weather Forecast Application* on the *Android* platform using *Java* & *Android Studio*. [\[code\]](#)

Huffman, *Huffman Coding*

- Implementation of the *Huffman Text Compression Algorithm* using *Java*. [\[code\]](#)

2048, *C++ Programming*

- Implementation of the *2048 Puzzle Game* with various gameplay tweaks using *C++*. [\[code\]](#)

Manobase, *VHDL Programming*

- Implementation of the *Morris Mano's Base Computer* using *VHDL*. [\[code\]](#)