

# Ali Gholami

<https://aligholamee.github.io>

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## EDUCATION

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- **Amirkabir University of Technology** Tehran, IR  
*Bachelor of Science in Software Engineering; GPA: 17.55/20* Aug. 2014 – Dec. 2018
- **Kamal High-school** Tehran, IR  
*Diploma in Physics and Mathematics; GPA: 19/20* Aug. 2012 – Jan. 2014

## RESEARCH EXPERIENCE

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- **Research Assistant** Tehran, IR  
*Bio-intelligence Center, Sharif University of Technology* July 2018 - Present
  - **Bio-medical Image Analysis:** Developed image processing algorithms and deep learning architectures to extract the sarcoidosis patterns in medical lung scans.
- **Freelance Researcher** Tehran, IR  
*Faculty of Computer Engineering, Amirkabir University of Technology* July 2018 - Present
  - **Visual Question Answering & Image Captioning:** Explored state of the art *CNN* and *RNN* architectures in the task of *VQA* and *IC*.
  - **Statistical Face Recognition:** Developed a real-time face recognition system with *Tensorflow* and *OpenCV* frameworks which implemented the maximum likelihood approximate nearest neighbor method for rapid selection of the reference images in large-scale databases.
  - **Image Template Matching with CUDA:** Designed and implemented a fast naive image template matching algorithm confirming the best practices in parallel processing using *CUDA* technology.

## WORK EXPERIENCE

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- **Web Development Intern** Tehran, IR  
*ArvanCloud* Jun 2017 - Sep 2017
  - **Smart Lock System:** Developed an administrative panel for an smart lock project using *PHP* and *Laravel*.
  - **Coding Practices:** Practiced the best coding styles in Javascript, especially Node.js and React.js.
- **Mobile Development Intern** Tehran, IR  
*Fandogh* Jun 2017 - Sep 2017
  - **Toofan Weather:** Designed and implemented a weather forecast application with *Java SE* and *Android Studio*.
  - **Ranjoor Poetry:** Developed a poetry application with *React Native*.

## TEACHING EXPERIENCE

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- **Microprocessors and Assembly Language** Tehran, IR  
*Supervisor: Prof. Mohammad Mahdi Homayounpour* Sep 2017 - Dec 2017
- **Foundations of Programming** Tehran, IR  
*Supervisor: Prof. Azadeh Mansouri* Sep 2015 - Dec 2015

## PROGRAMMING SKILLS

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- **Languages:** *Python, C/C++, Java SE, VHDL, ARM Assembly, AVR Assembly, Racket, ML, Scheme, HTML/CSS, Javascript, Latex.*
- **Frameworks and Environments:** *Tensorflow, Numpy, Matplotlib, Pandas, RapidMiner, Weka, OpenMP, CUDA, React Native, Node.js, Laravel.*
- **Databases:** *MongoDB, MySQL, PostgreSQL.*

## SELECTED HONORS

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- **Full Admission to Amirkabir University of Technology** due to outstanding performance at Kharazmi University of Tehran and Amirkabir University of Technology. Aug 2018
- **Ranked top 3** among most active **GitHub** developers in Iran. June 2018
- **Member of Executive Team** at the 17<sup>th</sup> International Collegiate Programming Contest held at the Amirkabir University of Technology. Nov 2017
- **Ranked top 3** among all bachelor students at Computer Engineering Department, Kharazmi University of Tehran. July 2016
- **Ranked top 0.6%** in the **Nationwide** University Entrance Exam among all students (approximately **250,000**) in mathematics and physics. July 2014
- **Elected** as the **tidiest** student at the campus of international summer school, *Institute Monte Rosa*, Montreux, **Switzerland**. Aug 2011

## SELECTED COURSES

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<b>Statistical Pattern Recognition:</b>	18/20	<b>Machine Learning:</b>	19.5/20
<b>Foundations of Data Mining:</b>	18.7/20	<b>Database Design:</b>	20/20
<b>Data Structures:</b>	18.5/20	<b>Algorithm Design:</b>	19.31/20
<b>Engineering Statistics:</b>	18.5/20	<b>Engineering Mathematics:</b>	19/20

## SELECTED TECHNICAL REPORTS

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- 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, 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://aligholamee.github.io/publications>

## REFEREES

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- **Prof. Mohammad Rahmati**  
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- **Prof. Mohammad Mehdi Homayounpour**  
*Email: homayoun@aut.ac.ir*
- **Prof. Mahmoud Momtazpour**  
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