Ali Gholami
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Education

- **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: 19.58/20*** — *Aug 2012 – Jan 2014*

Selected Courses

Statistical Pattern Recognition:	17/20	**Machine Learning**:	19.5/20
Foundations of Data Mining:	18.7/20	**Database Design**:	20/20
Data Structures:	18.5/20	**Algorithm Design**:	19.31/20
Engineering Statistics:	18.5/20	**Engineering Mathematics**:	19/20

Research Interests

3-D Model Reconstruction
Image Style Transfer
Image Synthesis
Generative Models
Automatic Image Captioning
Visual Question Answering
Imitation Learning
Bio-medical Imaging

Research Experience

- **Bio-intelligence Center, Sharif University of Technology** — Tehran, IR
  Research Assistant, Advisors: Prof. Ali Ghazizadeh and Prof. Reza Lashgari — *Jul. 2018 - Present*
  - **Bio-medical Image Analysis**: Developing image processing algorithms and deep learning architectures to extract the sarcoidosis patterns in medical lung scans.
- **Machine Learning Lab, Amirkabir University of Technology** — Tehran, IR
  Freelance Researcher, Advisors: Prof. Mohammad Rahmati and Prof. Mahmoud Momtazpour — *Nov. 2017 - Jul. 2018*
  - **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.

Programming Skills

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

Teaching Experience

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

English Proficiencies

- **TOEFL**: *Registered to take the test on October 14.*

Work Experience

- **ArvanCloud** Tehran, IR
  Web Development Intern *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.
- **Fandogh** Tehran, IR
  Mobile Development Intern *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*.

Selected Honors

- **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. Jun. 2018
- **Member of Executive Team** at the 17'th International Collegiate Programming Contest held at the Amirkabir University of Technology. Nov. 2017
- **Ranked top 3** among all bachelor students at Computer Engieering Department, Kharazmi University of Tehran. Jul. 2016
- **Ranked top 0.6%** in the **Nationwide** University Entrance Exam among all students (approximately **250,000**) in mathematics and physics. Jul. 2014
- **Elected** as the **tidiest** student at the campus of international summer school, *Institute Monte Rosa*, Montreux, **Switzerland**. Aug. 2011

Selected Technical Reports

- 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

Referees

- **Prof. Mohammad Rahmati** *Email: rahmati@aut.ac.ir*
  Faculty of Computer Engineering, Amirkabir University of Technology *Phone: +98 (21) 64542741*
- **Prof. Mohammad Mehdi Homayounpour** *Email: homayoun@aut.ac.ir*
  Faculty of Computer Engineering, Amirkabir University of Technology *Phone: +98 (21) 64542722*
- **Prof. Mahmoud Momtazpour** *Email: momtazpour@aut.ac.ir*
  Faculty of Computer Engineering, Amirkabir University of Technology *Phone: +98 (21) 64542721*