

## CONTACT INFORMATION

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## RESEARCH INTERESTS

- Deep Learning
- Neural Networks
- Reinforcement Learning
- Natural Language Processing
- Hardware Design
- Computer Vision

## EDUCATION

- **Amirkabir University of Technology**, (Tehran Polytechnic), Tehran, Iran  
B.Sc., Computer Engineering, 2018 - 2022 (expected)  
GPA: **3.51/4**  $\simeq$  **16.29/20**
  - Robotics: 4/4
  - Operating Systems: 4/4
  - Information Retrieval: 4/4
  - Computer Networks: 4/4
  - Artificial Intelligence: 4/4
  - Research and Technical Presentation: 4/4
  - Algorithm Design : 4/4
  - Programmable Digital Systems Design: 4/4
  - ◊ **Bachelor's Thesis:** *Deep Reinforcement learning based Portfolio Hedging*
  - ◊ Under supervision of **Prof. Safabakhsh**
- **Shahid Beheshti NODET High School**, Semnan, Iran  
High School Diploma in Mathematics and Physics, 2014 - 2018  
GPA: **18.89** / 20

## PUBLICATIONS AND PREPRINTS

- Ghorbani, A. **Askari, A.** Malekan, M. and Nili Ahmadabadi M. “*Thermodynamically-Guided Machine Learning Modelling for Predicting the Glass-Forming Ability (GFA) of Bulk Metallic Glasses.*”, (under review).
- **Askari, A.** and Zarandi, H. , “*Software Architecture Methodolgy for Embedded Systems in Automotive Domain.*”, Technical Report, September 2021.

## WORK EXPERIENCES

- **Industry 4.0 in Mining** June 2021 - Now  
Research Assistant at **Inotec of Amirkabir University Research Center**  
We work on industry4.0 and apply it to the mining industry base on industry4.0 enablers CSP, IoT, Big Data, Decentralize computing, and wireless network systems.  
◊ Under supervision of **Prof. Zarandi**
- **AI Engineer, Heyva Company** December 2020 - Now  
We work on deep neural network and apply it to recognize human sound and response to it.  
◊ Stack: Python, NLP toolkits, Rasa, Keras/PyTorch.
- **Embedded Software Developer, Crouse Company** October 2020 - July 2021  
We work on V-model and software architecture with C and Linux base on bare-metal and Real-time systems.  
◊ Under supervision of **Prof. Zarandi**
- **Embedded Linux Developer, Partodadeh Company** August 2020 - October 2020  
◊ Stack: CPP, makefile, buildroot, Yocto, Cross compile.
- **Back-End Developer, Pnashr Company** September 2019 - April 2020  
I was responsible for designing dbs and developing server side of Pnashr (mobile health) application and defining its software requirements.  
◊ Stack: Php7, Laravel, MySql, Git, Docker, RabbitMQ, Minio.

TECHNICAL SKILLS	<ul style="list-style-type: none"> <li>• <b>Programming &amp; Scripting Languages</b> Python, Scala, C/C++, VHDL, Golang, Bash Scripting, Java, AVR programming(Arduino)</li> <li>• <b>Machine Learning Tools</b> TensorFlow, Keras, PyTorch, scikit-learn, Numpy</li> <li>• <b>Databases Systems</b> Mysql, MongoDB, Redis</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Micro-service Systems</b> Docker, Minio, Git, Kubernetes, Hadoop</li> <li>• <b>Web Frameworks</b> PHP7, Laravel, Play, Django, JavaScript</li> <li>• <b>Operating Systems</b> Windows, Linux(Ubuntu, CentOS, Arch)</li> </ul>
TEACHING EXPERIENCES	<ul style="list-style-type: none"> <li>• <b>Teaching Assistant, Embedded and Real-Time Systems</b> Under supervision of <a href="#">Prof. Farbeh</a></li> <li>• <b>Teaching Assistant, Microprocessor and Assembly Language</b> Under supervision of <a href="#">Prof. Farbeh</a></li> <li>• <b>Teaching Assistant, Research and Technical Presentation</b> Under supervision of <a href="#">Prof. Safabakhsh</a></li> </ul>	<p><i>Spring 2021</i></p> <p><i>Spring 2021</i></p> <p><i>Spring 2021</i></p>
NOTABLE COURSE PROJECTS	<ul style="list-style-type: none"> <li>• <b>Information Retrieval</b> Developed a news search engine with the capability of crawling news, boolean and vector space searching, and enhanced by clustering and classification algorithms - <i>Impl. in Python</i></li> <li>• <b>Robotics</b> use ROS and gazebo11 stack to design robot use laser scan for obstacle avoidance and make tour in funny world. - <i>Impl. in Python</i></li> <li>• <b>Programmable Digital Systems Design</b> Developed CNN (Object Detection) theory with vivado software stack to design hardware (FPGA) for detect image faster than software design. - <i>Impl. in VHDL</i></li> </ul>	
LANGUAGE SKILLS	<ul style="list-style-type: none"> <li>• <b>English:</b> Professional working proficiency</li> <li>• <b>Persian:</b> Native</li> </ul>	
HONORS AND AWARDS	<ul style="list-style-type: none"> <li>• <a href="#">Certificate Sample-based Learning Methods</a> from <b>University of Alberta</b> 2021</li> <li>• <a href="#">Certificate Build Basic Generative Adversarial Networks (GANs)</a> from <b>DeepLearning.AI</b> 2021</li> <li>• <a href="#">Professional Certificate TensorFlow Developer</a> from <b>Laurence Moroney</b> 2021</li> <li>• <a href="#">Certificate Fundamentals of Reinforcement Learning</a> from <b>University of Alberta</b> 2021</li> <li>• <a href="#">Certificate Deep Learning Specialization</a> from <b>Andrew Ng</b> 2021</li> <li>• Participate in <b>IEEE Real-Time Systems Symposium</b>, IEEE Computer Society, 2020</li> <li>• Excellent entrance at <b>Amirkabir University</b>, 2018</li> <li>• <b>Ranked 108</b> in the Nationwide University Entrance Exam among all students in Mathematics and Physics (approximately 170,000), 2018</li> <li>• Accepted in the first level of <b>Iranian Computer Olympiad Exam</b>, 2016</li> <li>• Accepted in the first level of <b>Iranian Mathematics Olympiad Exam</b>, 2016,2015</li> </ul>	
REFERENCES	<ul style="list-style-type: none"> <li>• <b>Reza Safabakhsh</b> Professor, Member of Artificial Intelligence and Robotics Group, CE Department, Amirkabir University of Technology Email: <a href="mailto:safa@aut.ac.ir">safa@aut.ac.ir</a></li> <li>• <b>Hamid R. Zarandi</b> Associate Professor, Head Department and Member of Computer Architecture Group, CE Department, Amirkabir University of Technology Email: <a href="mailto:h_zarandi@aut.ac.ir">h_zarandi@aut.ac.ir</a></li> <li>• <b>Hamed Farbeh</b> Assistant Professor, Member of Computer Architecture Group, CE Department, Amirkabir University of Technology Email: <a href="mailto:farbeh@aut.ac.ir">farbeh@aut.ac.ir</a></li> </ul>	