

Alireza Taheri Tajar

Augusta, GA

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RESEARCH INTERESTS

- Deep Learning
- Computer Vision
- Robotics
- AI Cyber Security

EDUCATION

Ph.D. Student in Computer Science and Cyber Security (Aug 2023– Present)
Augusta University-Georgia Cyber Center, Augusta, GA, USA
GPA: 4.0/ 4.0

Master of Science in Electrical and Control Engineering (Sep 2016– Sep 2019)
Bu-Ali Sina University, Hamedan, Iran
Dissertation title: "Counting, Classifying and Detecting the Speed of Vehicles based on Computer Vision."
GPA: 3.31 / 4.0 – (Top student)

Bachelor of Science in Electrical Engineering (Sep 2012– Sep 2016)
Bu-Ali Sina University, Hamedan, Iran
Dissertation title: "Design and Fabrication of Camera Robot"
GPA: 3.25 / 4.0 – (Top student)

PUBLICATIONS

- Taheritajar, Alireza and Reza Rahaeimehr. "Acoustic Side Channel Attack on Keyboards Based on Typing Style of Users" (2023). [\[In Progress\]](#)
- Taheritajar, Alireza, Zahra Mahmoudpour Harris, and Reza Rahaeimehr. "A Survey on Acoustic Side Channel Attacks on Keyboards." arXiv preprint arXiv:2309.11012 (2023). [Link](#)
- Taheri Tajar, A., Ramazani, A. & Mansoorizadeh, M. "A lightweight Tiny-YOLOv3 vehicle detection approach". Journal of Real-Time Image Processing (2021). [Link](#)
- Heidari, E., Abdolmaleki, M., TaheriTajar, A., Mansoorizadeh, M., Dezfoulan, M., "Automatic image description with attention mechanism and repetitive language model." 4th National Conference on Computer, Information Technology and Application of Artificial Intelligence. Shahid Chamran University of Ahwaz (2021). (In Persian). [Link](#)

WORK EXPERIENCE

Graduate Research Assistant (Aug 2023 – Present)
Augusta University-Georgia Cyber Center, Augusta, GA, USA
• Researcher on fields of cyber security concepts focusing on side-channel attacks under the supervision of Dr. Reza Rahaeimehr

Machine Learning Engineer (Feb 2021 – July 2023)
Experts Group (AIEX), Montreal, QC, Canada
• Applied deep learning to computer vision problems and participated in related cutting-edge research.
• Developed an artificial intelligence-based framework to be implemented on edge devices and GPU servers in the field of computer vision for the visual industrial inspection platform.

Technical Manager (Sep 2017 - Mar 2020)
Sina ATI NET, Hamadan, Iran
• Designed and fabricated Vehicle Detection systems for installation on roads and highways.

Co-Founder and Technical Manager (Jan 2015 - Sep 2017)
Atitek Faradid Pars, Hamedan, Iran
• Manufactured industrial robots to use in the food industry.

TEACHING EXPERIENCE

- Teaching assistant for Microprocessors Design course (Spring 2017)
 - Teaching assistant for Logic Circuits Design course (Fall 2017)
 - Teaching assistant for the Signals and Systems course (Spring 2016)
 - Teaching assistant for the Electronic Circuits course (Fall 2016)
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AWARD AND HONORS

- Received certification of appreciation for presenting on 'Your Typing Style Leaks: What Are You Typing?' at AFCEA TechNet from CSM, U.S. Army Command Sergeant Major, and Major General, U.S. Army Commanding General. 2023
 - Admitted to Bu-Ali Sina University's graduate program in the fall of 2016 without entrance exams, a privilege granted to only 10% of top students. 2016
 - Bu-Ali Sina University Award as an Exceptionally Talented student. 2014
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PATENTS

- Apparatus for counting and classifying vehicles using an inductive loop. (I.R. 139850140003008739) 2020
 - Smart remote-controlled robot for cleaning hemispherical cameras. (I.R. 139850140003008741) 2020
 - Smart agricultural robot able to secrete toxins with the variable valve arrangement. (I.R. 139550140003003919) 2016
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PROJECTS**AIEX:**

- Implemented Salient Object Detection and Instance Segmentation algorithms using Yolov8, Yolov7, Yolov5, Yolov3, Mask-RCNN, Yolact, Yolact-Edge, and U2net. 2021
- Optimized models for edge devices and GPU servers using Pytorch Quantization and TensorRT.
- Developed Restful APIs for integrating Computer Vision services to Back-End and Front-End.

Bu-Ali Sina University:

- Developed RESTful Applications for Object Detection using YOLOv3 and Django. 2019
- Developed Vehicle Detection Applications using Tiny-YOLOv3.

ATI NET:

- Designed and fabricated an Inductive Loop Vehicle Detector to use on roads and highways. 2018

Atitek:

- Designed and fabricated an industrial robot to use in the food industry. 2016

RoboSina:

- Designed and fabricated soccer robots for the Iran Open International Competition. 2014
 - Design and fabricate Line Follower Robot.
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VOLUNTEER AND MEMBERSHIPS

- Vice President of Computer & Cyber Graduate Student Organization at Augusta University 2023
 - Head of Entrepreneurship Student Committee, Bu-Ali Sina University, Hamedan, Iran 2018
 - Member of the Executive Committee of the 14th Alumni Conference of the Festival of Nations 2016
 - Head of Electrical and Robotic Student Committee, Bu-Ali Sina University, Hamedan, Iran 2015
 - Coordinator of 1st Conference of Industry Relationship with University, Hamedan, Iran 2013
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TECHNICAL SKILLS

- Programming languages: **Python, MATLAB, C**
 - Machine Learning Frameworks: **Hugging Face, LangChain, Tensorflow, PyTorch, Keras, TensorRT, OpenCV, Detectron2, Mlflow**
 - Embedded Boards: **NVIDIA Jetson Nano, Raspberry PI**
 - Others: **Linux, Windows, Docker, Git, Jupyter, Anaconda**
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LANGUAGES

- **English** – Proficient (TOEFL IBT Overall Score: 86)
 - **Farsi** (Persian) – Native
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- More information is available upon request.