

Mohammad Amin Asadi

Deep Learning - Computer Vision Engineer

Mashhad, Iran

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Experienced computer vision engineer with multiple national awards in computer vision: self-driving cars competitions, specializing in Python, TensorFlow, and OpenCV, Over 5 years of programming experience, focusing on AI and deep learning, including notable achievements in autonomous vehicle competitions.

Skills

Current Stack:

- Python
- Tensorflow
- Convolutional Neural Networks (CNN)
- Deep Learning
- Machine Learning

- Linux
- Yolo models
- MediaPipe
- Image Classification
- SQL
- Docker
- RabbitMQ
- HuggingFace

- Transformers
- ONNX
- TensorRT
- Object detection
- Object Segmentation
- Large Vision Models

Prior Stack:

- HTML
- CSS
- JavaScript
- JQuery
- Django
- DRF

Experiences

Rapid Solutions International, UAE (Remote) - Tech-lead Warehouse Automation Projects
In Computer Vision Projects..... Sep2024 - Present

- Develop and Optimize Vision Models. Enhance CNN Model Performance with ONNX.
- Implement Image Enhancement Techniques using OpenCV. Optimize Model Serving with RabbitMQ.
- Research and Manage Large Image Datasets. Create and Maintain Technical Documentation.
- Collaborate with Cross-functional Teams for Model Deployment. Study and Apply Latest Computer Vision Research.
- Oversee Team Collaboration and Mentorship. Improve Model Accuracy and Training Processes.
- Drive Innovation in Warehouse Automation Solutions.

Department of Artificial Intelligence Research Center PartAI, Mashhad Iran— Computer Vision
Researcher and Developer..... Oct 2023 - Oct 2024

- Researched and developed more than 10 vision and large vision models.
- Excellent experience in team collaboration within a computer vision team of over 12 members.
- Optimized CNN models using ONNX and model tuning up to 10x when serving models on CPUs.
- Enhanced images with preprocessing OpenCV algorithms (smoothing, sharpening, and ...).
- Boosted computer vision models serving with a powerful RabbitMQ message-broker.
- Researched large image datasets for faster and more efficient model training.
- Documented more than 30 Wikis for explaining the R&D of every service to DevOps and other teammates.
- Exploring and Studying computer vision papers to improve our training processes.

Freelancer — Computer Vision Engineer..... Jan 2023 - Oct 2023

- Designing a real-time GUI Cross-platform Persian plate recognition desktop application for an automatic parking management system using YOLOv8, YOLO-NAS, and Tkinter for Detection and GUI desktop design with +95% accuracy on +1000 real-world testing images.
- Creating one of the biggest Persian plate datasets in Roboflow with ~5000 annotated unique images, more than 100 times downloaded and 1142 times viewed.
- Training and evaluating cutting-edge Object Detection models (Yolo, Efficient Det, and ...).
- Inventing an AI application that could help blind people walk in streets more easily and safely using Raspberry PI 4, detection model, and ultrasonic SRF sensors.

I3center, Mashad, Iran —Python tutor..... Jan 2022 - Nov 2022

- Teaching passionate Python learners and programming lovers.
- Creating online and video Python studying content during the coronavirus pandemic.
- Active online support for both online and face-to-face classrooms.
- Tutoring Python from basics to Object Oriented Programming (OOP) level.

Amirkabir Vocational School Academy of Brilliant Talents, Mashhad, Iran — Computer Vision Engineer and Robotics Vision tutor (I was also a student in this Academy)..... SEP 2020- JUNE 2023

- Cultivating vision, science and knowledge in the minds of talented teenagers.
- Building an auto-student-attendance application with Face Recognition technology and RSTP protocol cameras.
- Constructed and led an association of Robotics and AI at Amirkabir Academy.
- Trained and coached AI-talented students with autonomous simulators like Gazebo and AVIS-Engine.

Toopita & Telefonchy, mashhad, Iran — Junior Front-end Developer & Technical Support..... OCT 2019 - DEC 2020

- Starting my IT career in a high-tech VOIP service company as a front-end developer.
- Learning and developing front-end websites using HTML, CSS, JQuery, JS, and a sip of PHP.
- After a few months, I started writing Python web-scraping applications so that the application could find company phone numbers and contact information from their websites.
- Solving +300 customers' problems in their VOIP experiences.
- Updating and managing companies' VOIP lines as needed.

Awards

All awards and certificates are available here -> [Google Drive Link](#)

- 🏆 First Place in the self-driving cars (Pro League) competition of the ICROM AmirKabir University, (Simulator) 2024 (Coach)
- 🏆 First Place in the exhilarating self-driving cars (Pro League) competition of the [IRAN Tech Olympics](#), (Simulator - race) 2024. (Member)
- 🏆 First Place in the exhilarating self-driving cars U19 competition of the [IRAN Tech Olympics](#), showcasing my prowess in technical Coaching and leadership (Simulator) 2024. (Team Coach)
- 🏆 First Place in the exhilarating self-driving cars U19 competition of the IRAN [Fira](#) Cup's League, showcasing my prowess in autonomous vehicles (Simulator) 2021.
- 🏆 First Place in self-driving cars U19 competition of the IRAN [Fira](#) Cup's League (All-rounds) 2023.
- 🏆 First Place in self-driving cars U19 competition of the IRAN [Fira](#) Cup's League (Simulator) 2023.
- 🏆 First Place in self-driving cars U19 competition of the IRAN [Fira](#) Cup's League (Race - Simulator) 2023.
- 🏆 First Place in the national robotics competition ROBOIUT, outshining competitors in solving maze-line challenges at the Isfahan University of Technology 2021.
- 🥈 Second Place in self-driving cars Open competition of the IRAN [Fira](#) Cup's League (Race - Simulator) 2023.
- 🥈 Second Place in the open league of the [Fira](#) Cup's self-driving cars competition (simulator)2021.
- 🥉 Third Place in self-driving cars (Pro League) competition of the [IRAN Tech Olympics](#) (simulation league) 2024.
- 🥉 Third Place in self-driving cars (Pro League) competition of the [IRAN Tech Olympics](#) (physical league) 2024 (Coach).
- 🥉 Third Place in self-driving cars Open competition of the IRAN [Fira](#) Cup's League (All-rounds) 2023.
- 🥉 Third Place in self-driving cars U19 competition of the IRAN [Fira](#) Cup's League (Urban - Simulator) 2023.

Education

- Currently studying BS in Software Engineering at Azad University, Iran (Present).
- Diploma Degree in Network and Software at Amirkabir Vocational School Academy of Brilliant Talents, Iran.
- 📜 Proudly possess the ICDL IRAN Association Certificate in Python, a testament to my expertise in the programming realm.

Languages

- English (C1) - IELTS 7
- Persian (Native)