

# 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
- PyTorch
- 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

#### Department of Artificial Intelligence Research Center, Mashhad Iran — Computer Vision

*Researcher and Developer..... Oct 2023 - PRESENT*

- 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 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, Mashad, Iran — Computer Vision Engineer and Robotics Vision tutor (I was also a student in this Academy)..... SEP 2020- JUN 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**

- 🏆 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 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**

- 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 (Fluent)
- German (A2)
- Persian (Native)