# Amir Mohammad **Ghoreyshi**

AI · COMPUTER VISION RESEARCHER · DEVELOPER

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## Education

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|---|---|---|---|
| **Shahid Rajaee University** , B.S. in Computer Engineering | CGPA : 3.44 / 4 | 2014 - 2018 | *Tehran, Iran* |
| **Shahid Beheshti University** , M.S. in Computer Engineering | CGPA : | 2022 - present | *Tehran, Iran* |

## Skills

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|---|---|
| **Computer Vision** | Classification \| Object Detection \| OCR \| Face Recognition \| GAN \| Classic Image Processing |
| **Frameworks** | Tensorflow \| Keras \| Pytorch \| Onnxruntime \| TensorRT \| Deepstream |
| **Packages** | Opencv \| Scikit Learn \| Numpy \| Matplotlib \| Pandas |
| **Deep Learning** | CNN \| RNN \| CNN Backbones \| Model Optimization \| Transformers |
| **Programming** | Python \| C++ \| Java \| Java Script \| Android Programming \| HTML/CSS \| OOP |
| **Computer Tools** | Linux \| Microsoft Windows \| Docker \| Git \| GPU setup \| IDEs VSC,Pycahrm,JN |

## Work Experience

**Part AI Research Center**  *Tehran, Iran*
COMPUTER VISION RESEARCHER AND DEVELOPER  *May 2018 - Present*

**Shenasa AI**  *Tehran, Iran*
COMPUTER VISION DEVELOPER  *September 2017- August 2018*

**Roshan**  *Tehran, Iran*
COMPUTER VISION DEVELOPER  *January 2017- September 2017*

## Projects

**Project 1: Farashenasa**  *Part AI Research Center*
 FARASHENASA  *Nov. 2020 – Dec. 2022*

- Developed Iran's largest **online identity verification platform** with over **10 million authenticated users**.
- Built and deployed AI-based systems for **face, signature, and fingerprint recognition**.
- Implemented **liveness detection** using texture analysis and face anti-spoofing techniques.
- Added **user awareness detection** through hand gesture and head pose recognition.
- Optimized deep learning models for real-time performance on low-power devices.

**Project 2: Icup**  *Part AI Research Center*
 ICUP  *Nov. 2019 – Dec. 2020*

- Designed and integrated CV-based modules into a financial super-app with over **500,000 active users**.
- Developed AI-driven **user authentication** and automated processing of national and banking cards.
- Optimized image-processing pipelines to run efficiently on client-side mobile devices.

**Project 3: Smart Surveillance System for Vehicle and Person Monitoring**  *Part AI Research Center*
 SEPEHR  *Nov. 2018 – Present*

- Developed an AI-based surveillance system for **vehicle and pedestrian monitoring** using live video feeds.
- Implemented real-time **object detection** to track vehicles and people across different scenes.
- Built classification models to recognize **115 car types** and deployed OCR modules to extract **license plate text**.
- Engineered lightweight facial detection models optimized for speed and deployment on low-power edge devices.
- Trained models for **facial attribute extraction**, including **age and gender prediction**.
- Enabled identity-based tracking by combining vehicle and facial recognition pipelines into a unified monitoring platform.
- Designed and deployed the entire video analytics pipeline using **NVIDIA DeepStream**, with custom plugins for efficient multi-stream processing.

**Project 5: Early Diagnosis of Alzheimer's Using AI**  *Shahid Rajaee University*
 ICA  *Nov. 2019 – Dec. 2020*

- Built the **Integrated Cognitive Assessment (ICA)**, a 5-minute AI-driven test for early Alzheimer's screening.
- Designed to be **language-, culture-, and education-independent** for global use.
- Used AI to analyze high-dimensional cognitive and demographic data for accurate diagnosis.
- Published in a peer-reviewed journal; demonstrated high potential for early AD detection.

# Publications

Google Scholar                                                                                                      *2020*

- A. M. Ghoreyshi, A. AkhavanPour and A. Bossaghzadeh, "Simultaneous Vehicle Detection and Classification Model based on Deep YOLO Networks," 2020 International Conference on Machine Vision and Image Processing (MVIP), 2020, pp. 1-6, doi: 10.1109/MVIP49855.2020.9116922.

Google Scholar                                                                                                      *2022*

- S. Khanehgir, A. Mohammad Ghoreyshi, A. Akbari, R. Derakhshan and M. Sabokrou, "Light Face: A Light Face Detector for Edge Devices," 2022 International Conference on Machine Vision and Image Processing (MVIP), 2022, pp. 1-6, doi: 10.1109/MVIP53647.2022.9738740.

Google Scholar                                                                                                      *2020*

- Modarres MH, Khazaie VR, Ghorbani M, Ghoreyshi AM, AkhavanPour A, Ebrahimpour R, Vahabi Z, Kalafatis C, Razavi SM. Early diagnosis of Alzheimer's dementia with the artificial intelligence based Integrated Cognitive Assessment: Neuropsychology computerized neuropsychological assessment. Alzheimer's Dementia. 2020 Dec.

# Research Interests

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| **Machine Learning** | Analyzing data and designing predictive models |
| **Deep Learning** | Building cutting edge AI services and applying scientific methods to generate real-world products |
| **Computer Vision** | Solving problems based on the concepts of machine vision and neural networks |
| **Model Optimization** | Design and optimization of deep networks for light devices |

# Awards

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| 2019 | **Third rank**, Distorted license plate recognition challenge which was hold by the municipality of Tehran | *Tehran, Iran* |

# Teaching

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| Winter 2020 | **Part AI college**, Image Classification, CNN, Object Detection | *Tehran, Iran* |
| Summer 2021 | **Part AI college**, Object Detection using RCNNs, SSD, YOLO algorithms | *Tehran, Iran* |
| Winter 2021 | **Part AI college**, Face Detection and Recognition algorithms | *Tehran, Iran* |

# Languages

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| **English** | Advanced |
| **Persian** | Native |
| **German** | Begginer |

# Referees

**Dr. Reza Ebrahimpour**                                                                                          *Tehran, Iran*

Prof. of Cognitive Neuroscience, Shahid Rajaee University (SRU) and School of Cognitive Sciences, IPM                *Personal Page*

**Dr. Alireza Bosaghzadeh**                                                                                       *Tehran, Iran*

Assistant Professor, Shahid Rajaee University (SRU)                                                                 *Personal Page*

**Mr. Alireza AkhavanPour**                                                                                       *Tehran, Iran*

Lecturer at class.vision | Researcher at Shenasa.ai                                                                 *Personal Page*