MOHAMMADHOSSEIN AKBARI MOAFI

AI Researcher, Padova, Italy
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SUMMARY

AI Researcher & Engineer with an M.Sc. in Computer Engineering from the University of Padova, specializing in artificial intelligence and machine learning. My work spans computer vision, deep learning, recommendation systems, robotics, and real-time AI applications, with growing expertise in large language models (LLMs), multimodal systems, and graph-based learning. Proficient in Python, C++, PyTorch, TensorFlow, and OpenCV, I focus on developing robust, efficient, and scalable AI solutions. I'm driven by applied research and the practical deployment of intelligent technologies across domains.

EDUCATION

University of Padova, Padova, Italy   Sep 2022 — Jul 2025
M.Sc. Computer Engineering(Specialization: AI and Robotics)   CGPA: 24.81/30
Thesis Title: Efficient Auto-Labeling for Enhanced Semantic Segmentation Annotation: An Ensemble-Based Framework with SAM Refinement.

Azad University, Rasht, Iran   Sep 2017 — Jul 2021
B.Sc. Computer Engineering   Last two-year CGPA: 17.87/20
Final Project: Used Car Price Prediction System - Scored 20/20

EXPERIENCE

Graz University of Technology   Graz, Austria
Master's Thesis Researcher (Erasmus Exchange Program)   Oct 2024 – Mar 2025

- Designed an **auto-labeling framework** that ensembles UPerNet, OCRNet, and DeepLabV3+ using **logit fusion** and **SDF-weighted integration** for consistent semantic segmentation predictions.
- Refined ambiguous regions and boundries using **zero-shot instance segmentation with the foundation model SAM**, enabling **label-agnostic fusion of semantic and instance outputs**.
- Achieved a **5.8% mIoU improvement** over the best individual model while reducing annotation time to ~ 3 seconds per image, significantly minimizing manual effort.
- Accepted at **ICIAP 2025** for "Ensemble-Enhanced Semantic Segmentation for Efficient Waste Recycling."

Shomal Electronics   Rasht, Iran
Computer Engineering Intern   Mar 2021 – Jul 2021

- Installed and configured servers, routers, switches, and operating systems (Linux & Windows).
- Supported setup and maintenance of security systems, including CCTV and burglar alarms.
- Assisted in troubleshooting and documenting network and system issues.

SCHOLARSHIPS & AWARDS

DSU Scholarship (Master's Degree)   Padova, Italy
Awarded tuition fee waiver and scholarship of €20,000 based on academic merit and financial need.

Erasmus Program Scholarship   Graz, Austria
Secured a scholarship totaling €4,500 (€900 per month) to conduct master's thesis research at Graz University of Technology, enhancing international academic collaboration and research experience.

SKILLS

- **Technical Skills:**
    - **Programming:** Python, C++, MATLAB, LaTeX
    - **Frameworks & Libraries:** PyTorch, TensorFlow, ROS1, OpenCV, Scikit-Learn
    - **Tools & Platforms:** Git, Docker, CUDA, AWS, Microsoft Azure
- **Soft Skills:** Communication, Problem-solving, Teamwork, Leadership, Time Management, Critical Thinking
- **Languages:**
    - **English:** IELTS (Academic) – 6.5
    - **Italian:** [A2]
    - **Persian:** Native