Hamid Taheri | Computer Vision and Robotics

Gmail LinkedIn Webpage +49 1764 5657055

Rathausstr. 5, 74080 Heilbronn, Germany

Professional Experience

2026 Mar – Present — **Applied AI Software Engineer, amitego Engineering GmbH, Germany.** Developing VMask, an AI-powered privacy masking system for remote desktop sessions. Working on real-time OCR, computer vision, GPU inference, backend services, and Linux-based remote desktop infrastructure.

2025 Nov – 2026 Feb — **AI/ML and Full-Stack Innovation Intern, PreZero Stiftung & Co. KG, Germany.** Worked on two AI logistics projects: route optimization and predictive container pickup planning. Built ML models, backend logic, and a full-stack prototype for internal testing.

2024 Sep – 2025 Mar — **Computer Vision Engineer – Intern, Schwarz IT KG, Germany.** Developed object detection, anomaly detection, and OCR models for industrial applications. Worked with **Python, Docker, Azure, Kubernetes, and CI/CD**.

2017 Sep – 2018 Feb — **Instrumentation Engineer, South Isfahan Power Station, Iran.** Worked on calibration, monitoring, sensor integration, and control loop tuning for instrumentation systems.

Education

2023 Mar – present — **Software Developer, 42 Heilbronn, Germany.** Developed proficiency in **Python, C, C++, Shell scripting, and Docker** through intensive, project-based training in systems programming and AI integration.

2019 – 2022 — **M.Sc. Electrical Engineering, Control Systems.** K. N. Toosi University of Technology, Tehran, Iran.
Thesis title: ***Continuous Control of Nonholonomic Mobile Robot Navigation Deep Reinforcement Learning (PPO, DDPG)***. Focused on real-time, vision-based autonomous navigation and deep control strategies for mobile robotics.

2014 – 2018 — **B.Sc. Electrical Engineering, Control Systems.** Isfahan University, Isfahan, Iran.
Thesis title: ***Mentor Robot Position Control Using Forward Kinematic Concept and Mobile Sensors Data***. Developed control algorithms integrating sensor data and kinematic modeling for mobile robot positioning.

Research Publications

Journal Articles

1. **Hamid Taheri**, S. R. Hosseini, and M. A. Nekoei, "**Deep Reinforcement Learning with Enhanced PPO for Safe Mobile Robot Navigation**", *arXiv preprint*, vol. 2405.16266, 2024. URL: https://arxiv.org/abs/2405.16266.
2. S. R. Hosseini, **Hamid Taheri**, and M. Teshnehlab, "**ENet-21: An Optimized Light CNN Structure for Lane Detection**", *arXiv preprint*, vol. 2403.19782, 2024. URL: https://arxiv.org/abs/2403.19782.

Skills

Languages	Fluent in English, intermediate in German (B1), and native in Persian.
Coding	C/C++, Python, MATLAB, Shell.
DevOps Tools	Docker, Kubernetes, Git, ROS, Azure Pipelines.
Web Dev	HTML, CSS, JavaScript.
AI Frameworks	PyTorch, TensorFlow, Scikit-learn, OpenCV, LangChain, Hugging Face.

Miscellaneous Experience

Projects

2025 **3D classification and segmentation.** Implementation of 3D deep learning architectures including PointNet, PointNet++, PointMLP, and DGCNN for classification and segmentation. [GitHub]

3D Object Detection on RGB-D Data. Built an end-to-end 3D object detection pipeline using RGB-D data with a custom architecture, handling training on a small dataset. [GitHub]

2024 **Safe Mobile Robot Navigation using PPO and SAC.** Built a deep RL-based navigation system (PPO, DDPG) with ROS and LiDAR, focusing on collision avoidance in dynamic environments. [GitHub]

Object Detection with YOLOv3. Built a real-time object detection pipeline with YOLOv3 and non-max suppression on COCO dataset, achieving 90% mAP. [GitHub]

ViT-AnomalyDetection. Designed a hybrid Vision Transformer and CNN model for industrial anomaly detection on the MVTec dataset. [GitHub]

Webserv. Developed a complete HTTP server in modern C++ to fully understand the HTTP protocol and non-blocking network programming. [GitHub]

C++ Modules. Implemented a complete C++ module to deepen my understanding through practical, meaningful projects. [GitHub]

MiniRT. Built a ray tracer in C for photorealistic rendering with lighting, shadows, and material reflections. [GitHub]

2023 **MiniShell.** C-based Unix shell emulator featuring command parsing, piping, and redirection. [GitHub]

Custom MLP Library. Developed a minimal neural network framework with `numpy`, supporting classification/regression with emphasis on learning efficiency. [GitHub]

2021 **Fault Detection in Rotating Machinery.** Achieved 99% accuracy and 98% F1-score using Deep Stack Autoencoders for predictive maintenance. [GitHub]

Awards and Achievements

2025 **Top Performer, Audi - XL2 DeepRacer RL Competition**, Germany. Ranked among the top participants in virtual and on-site reinforcement learning competition for autonomous navigation.

2019 **Ranked 67th, National Master's Entrance Exam**, Iran. Among top 0.2% out of 30K+ participants.

2018 **Exceptionally Talented Student**. Admitted to Iran University of Science and Technology without an entrance exam.

Top 3 Graduate in B.Sc. Program. University of Isfahan.

Certifications

2024 **Generative AI with Large Language Models**. [Coursera]

2023 **Sequence Models**. [Coursera]

Supervised Machine Learning: Regression and Classification. [Coursera]

Natural Language Processing with TensorFlow. [Coursera]

2022 **Convolutional Neural Networks**. [Coursera]