

Amir Reza Safari

AI & Computer Vision Researcher in Motorway Traffic Systems

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RESEARCH INTERESTS

Traffic state estimation & prediction · AI-based traffic monitoring & management · Digital twins & traffic simulation · Computer vision for transportation data (vehicle detection, tracking, re-identification, trajectory extraction, lane-level speed estimation from CCTV, UAV, and multi-camera video).

EXPERIENCE

Software Operator — CCAMON

Sept 2026 – Dec 2026

Naples, Italy

Apply computer vision and traffic-analysis methods within a traffic analysis service supporting smart-road deployment across the Italian road network; traffic data extraction and connected-road technology deployment support.

Digital Twin Research Fellow

Mar 2025 – Aug 2026

Ce.S.M.A., University of Naples Federico II

AI pipelines for vehicle detection, multi-object tracking, re-identification, lane assignment, and lane-level speed estimation from roadside cameras; integrated video observations with SUMO/TraCI for real-time digital-shadow models; merging-behaviour analysis via TCA, dTCA, and TTC.

Teaching Assistant — Transportation and Mobility with UAS

Fall 2025

University of Naples Federico II · under Prof. Gennaro Nicola Bifulco

Guided students applying YOLO-based models to vehicle detection on aerial highway video; supported practical video-based traffic-monitoring activities.

Road Survey Assistant — Benis Pol Company

Jan 2017 – Jan 2023

Road Construction · Tehran, Iran

Surveying support and contract control on road-construction projects, alongside undergraduate and graduate study.

EDUCATION

Master's Degree, Transportation Engineering & Mobility

Oct 2022 – Feb 2025

University of Naples Federico II · GPA 110/110 cum laude

Focus: AI, computer vision, smart roads, C-ITS, traffic data analytics. Thesis: “Leveraging AI Techniques for Enhanced Traffic Data Collection at Motorway Merging Areas.” Supervisor: Prof. Gennaro Nicola Bifulco · Co-supervisor: Prof. Angelo Coppola. Awarded the Premio Jacopetti-Tocchetti 2025–26 Best Master's Thesis Award.

Bachelor's Degree, Civil Engineering

Sept 2014 – Jul 2018

Sharif University of Technology, Tehran, Iran

Transportation Engineering coursework: 18.20/20.

SELECTED PUBLICATIONS

A. Coppola, A. R. Safari, “Leveraging AI Techniques to Understand and Simulate Driving Behaviours,” *IEEE RTSI 2024*. DOI: 10.1109/RTSI61910.2024.10761327. (Published)

A. R. Safari, A. Coppola, G. N. Bifulco, “Time to Closest Approach as a Feasibility Descriptor for Highway Merging: Methodology and Empirical Threshold Extraction,” submitted to *IEEE Transactions on Intelligent Transportation Systems*. (Submitted)

A. R. Safari, A. Turati, G. Acunzo, A. Coppola, “AI-Driven Vehicle Classification and Speed Estimation on the A56,” submitted to *Transportation Research Procedia*, XXVII SIDT Scientific Seminar. Plus three further submitted /

in-preparation works — full list at amirrezasafari.com/publications.

TECHNICAL SKILLS

Programming	Python, MATLAB, R, Java
Modeling & Simulation	SUMO, TraCI, CARLA, PTV Visum, simulation calibration, microscopic traffic analysis
Computer Vision & AI	Object detection, segmentation, re-identification, video analytics
Data & Statistics	Statistical inference, multivariate analysis, clustering, PCA, outlier detection, Apache Spark

HONORS, SERVICE & LANGUAGES

Best Master's Thesis Award — Premio Jacopetti-Tocchetti 2025–26, Rotary Club Napoli and Distretto Rotary 2101; awarded ex aequo for outstanding engineering Master's thesis work in Campania, Italy.

CeSMA Research Scholarship — University of Naples Federico II, March 2025; competitive selection for research on digital twins of road infrastructure.

Academic service — Reviewer, RSS 2026 (10th International Conference on Road Safety and Simulation); Reviewer, ICONIP 2026 (International Conference on Neural Information Processing).

Languages — English (B2), Italian (A2), Farsi (Native)