Halid Esad Saglam

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About me

Embedded Systems Engineer at Ekin Smart City developing multi-sensor fusion algorithms for smart city applications. Specialized in integrating radar, LiDAR, and camera systems for real-time vehicle detection and traffic monitoring on NVIDIA Jetson platforms.

Computer Engineering graduate (GPA: 3.12) with ISTQB certification and hands-on experience in edge AI, computer vision (OpenCV, YOLO), and ANPR systems. Seeking to pursue advanced studies in autonomous systems and smart mobility solutions in Germany.

Work experience

Embedded Systems Software Engineer | Ekin Smart City Technologies (Ekin Europa GmbH) | 17/04/2024 - Current | Ankara, Türkiye

- Development of real-time vehicle and speed detection systems using radar, LiDAR, and camera sensor fusion (Kalman Filter, EKF/UKF algorithms)

- Integration of ANPR (Automatic Number Plate Recognition) and facial recognition algorithms into embedded systems (OpenCV, TensorFlow Lite)

- IP/MIPI camera systems integration and H.264/H.265 video codec optimization

- Software development in C/C++ and Python on Linux-based embedded platforms (NVIDIA Jetson)

- Optimization of Edge AI models and real-time processing applications

- Project management using Agile/Scrum methodology, technical documentation, and customer solution development

- Test processes according to ISTQB standards and CI/CD pipeline development

Company Profile: Ekin Smart City is a global leader in smart city technologies since 1998, developing pioneering AI and computer vision solutions. Operating from its advanced R&D center in Ankara Bilkent Cyberpark, the company has secured critical events like NATO Summit and FIFA World Cup, established 500+ City Security Command Centers worldwide, and received 40+ international innovation awards. Developer of the world's first mobile ALPR system.

Website: www.ekin.com

Education & Training

Bachelor's Degree in Computer Engineering | Erciyes University | 19/08/2019 - 10/09/2024 | Kayseri, Türkiye

Final grade: 3,12/4 | **Level in EQF** 6 | **National classification:** 4-year Bachelor's Degree (240 ECTS)

Software Development Internship | B & B Bili_im Co | 02/01/2024 - 03/03/2025 | Kayseri, Türkiye

Level in EQF 6

Language Skills

Mother tongue(s): **Turkish**

	Understanding		Speaking		Writing
	Listening	Reading	Spoken production	Spoken interaction	

German	B1	B1	B1	B1	A2
English	B2	C1	B2	B2	B2
Spanish	A1	A1	A1	A1	A1

Skills

C | C++ | Python | Linux kernel programming and device drivers | NVIDIA Jetson platform development | Embedded Linux systems | Edge computing architectures | Radar systems and LIDAR integration | MIPI CSI-2 camera interfaces | IP cameras and RTSP streaming | OpenCV and YOLO object detection | ANPR/ALPR (Automatic Number/License Plate Recognition) | H.264/H.265 video encoding | FFmpeg multimedia framework | ISTQB certified testing methodologies | Problem solving and analytical thinking | Research skills and critical thinking | Technical documentation | Team collaboration and project management | Time management and adaptability

Projects

Multi-Sensor Fusion Smart Traffic Control System | 09/06/2025 - Current

Developed real-time vehicle speed detection and tracking system by fusing radar, LiDAR, and camera data using Extended Kalman Filter (EKF) algorithm. Implemented in C++ on NVIDIA Jetson platform, achieving 95% accuracy rate for vehicle detection up to 50+ km/h. System demonstrated reliable performance even in adverse weather conditions.

Edge AI-Based License Plate Recognition System | 04/09/2024 - 02/02/2025

Developed real-time ANPR system for embedded devices using TensorFlow Lite and OpenCV. Optimized YOLOv5 and YoloV8small models to achieve 30 FPS performance on Jetson Nano. Reached 98% accuracy rate for Turkish license plates.

Radar-Camera Synchronization and Calibration Tool | 22/04/2025 - 25/08/2025

Developed Python-based tool for temporal and spatial calibration between 77GHz millimeter-wave radar and IP camera systems. Implemented NTP protocol for inter-sensor time synchronization. Achieved calibration accuracy of <10ms temporal and <5cm spatial precision.

Certifications

ISTQB Certified Tester Foundation Level (CTFL) | International Software Testing Qualifications Board | 11/07/2022

ISTQB Certified Tester Foundation Level (07/2022) International Software Testing Qualifications Board Certificate No: 0722 CTEL 3478

Self-Driving Cars Specialization | University of Toronto | 08/11/2022

Comprehensive training on autonomous vehicle technologies including state estimation, localization, perception, motion planning and control. Hands-on projects with Kalman filters, LIDAR/camera fusion and path planning algorithms. Certificate ID: BBBMKRYXBQ9Y

IBM Applied AI Specialization | IBM | 21/11/2022

Applied artificial intelligence techniques and machine learning algorithms. Gained expertise in computer vision, NLP and AI model deployment. Practical experience with Watson AI services and deep learning frameworks.

Certificate ID: ZJWL5ZHDNPQX