ZEYAD ELSHAMY

AI ENGINEER

AI and Robotics Specialist skilled in intelligent systems, machine learning, and robotics. Holds a Bachelor's degree in Artificial Intelligence with a focus on Robotics and currently pursuing a Master's in AI for Smart Sensors and Actuators. Actively seeking opportunities to contribute to innovative AI and robotics projects and expand expertise through practical applications.

CONTACT

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Github: github.com/Zeyadelshamy

Address: Germany, Regensburg, (Flexible).

HARD SKILLS

- Python, C, Embedded C, HTML, CSS, JavaScript.
- Arduino, Raspberry Pi, NVIDIA Jetson, lattePanda, Sensors & Actuators.
- ROS, EasyEDA ,AWS , GitHub, Linux , VS Code , Docker.
- TensorFlow, PyTorch, OpenCV, Scikit-learn, YOLO, Plotly, Seaborn, LLMs(GPT-API,HuggingFace Transformers).
- Sensor Fusion, Path Planning, SLAM.
- PowerPoint, Word, Excel, Outlook.

EXPERIENCE & PROJECTS

GRADUATION BACHELOR'S PROJECT "RAFEQI"

- Developed a humanoid personal assistant robot capable of autonomous operations in complex environments.
- Implemented AI for computer vision and NLP, and kinematics for precise movements.
- Published research on "RAFEQI," a cost-effective personal assistant robot, RIMC, AASTMT, 2024.
- Software used: Python, ROS, OpenCV, TensorFlow.

AUTONOMOUS LANE DETECTION SYSTEM

- Designed and implemented a lane detection pipeline using OpenCV and deep learning.
- Applied Canny edge detection, Hough Transform, and curve fitting for accurate lane tracking.
- Integrated into ROS2 (Gazebo) for real-time simulation.

EYE STATE AND DROWSINESS DETECTION SYSTEM

- Built a real-time drowsiness detection system using CNN-based eye-state classification, yawning detection (MAR), and head-pose estimation.
- Developed a continuous drowsiness scoring algorithm with live visual and audio alerts for driver safety.
- Tools: Python, TensorFlow, OpenCV, MediaPipe, pyttsx3.

EDUCATION

M.Eng. AI For Smart Sensors & Actuators | 03/2025 – present

Technische Hochschule Deggendorf, Cham, Germany

- Focus on: Advanced Programming, Advanced Sensor Technology, AI and Machine Learning, System Design, Model- Based Function, Edge-Device Architecture.

B.Sc. Artificial Intelligence | 08/2020 – 09/2024

Arab Academy For Science, Technology & Maritime Transport(AASTMT), Alamein, Egypt

- Relevant Courses: Machine Learning, Deep Learning, Reinforcement Learning, Computer Vision, Cloud Computing, HPC, Image Processing, Embedded System & IOT, Advanced Robotics.
- Major: Robotics and Intelligent Systems.
- Final grade of 3.0/4.0.

TRAINING AND CERTIFICATES

- Introduction to Cloud 101. AWS Training and Certificate, 2024.
- Machine Learning Foundations. AWS Training and Certificate, 2024.
- Artificial Intelligence and Applications. Zewail City of Science and Technology, 2023.
- Summer School in Computer Science and AI. Autonomous University of Barcelona (UAB), 2022.
- RoboCup Junior Egypt – Rescue Line Category Participant, 2022.

ACCOMPLISHMENTS

- Volunteer in the Organisation Committee, ICPC Final Competition, Egypt, 2023.
- Member in Hardware Committee, AAST Robotics Club, Egypt, 2021– 2024.
- Publication RAFEQI: Design and Implementation of a Cost-Effective Personal Assistant Robot, Robotics: Integration,Manufacturing & Control (RIMC), AASTMT Publishing Centre, 2024, **(PDF)**.

SOFT SKILLS

- Profound hardware and electronics skills.
- Analytical thinking & problem-solving.
- Communication & presentation.
- Collaboration & teamwork.
- Fast learner and high adaptability.
- Creativity & multitasking.

LANGUAGES

- Arabic: Native.
- English: Fluent (C1).
- German: Beginner (A1–A2).