Majid Manzoor

Date of birth: 14 Jul 2000 | **Nationality:** Pakistani | **Gender:** Male | **Phone number:** (+86) 13258174461 (Mobile) | **Email address:** majidmanzoor170@gmail.com | **LinkedIn:** manzoormajid |

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ABOUT ME

Enthusiastic and motivated researcher with expertise in **deep learning**, **computer vision**, and **intelligent transportation**. Focused on AI-driven perception and decision models for connected and automated vehicles.
Research Interests: AI-driven perception, end-to-end decision-making, and safety efficiency for AVs.

EDUCATION AND TRAINING

SEP 2023 – CURRENT Chengdu, China
MASTERS OF SCIENCES Southwest Jiaotong University

Website www.swjtu.edu.cn | **Field of study** Computer Science and Technology | **Final grade** 3.5/4.0 (CGPA) |

Thesis Enhancing Autonomous Driving with Vision-Based Perception and Trajectory Guidance.

2018 – 2022 Nerian Sharif, AJ&K, Pakistan
BACHELOR OF SCIENCE Mohi-ud-Din Islamic University

Website www.miu.edu.pk | **Field of study** Computer Science | **Final grade** 3.73/4.0 (CGPA) |

Thesis Real-time Object Detection for Autonomous Driving using Deep Learning

WORK EXPERIENCE

EZILINE SOFTWARE HOUSE – RAWALPINDI , PAKISTAN
COMPUTER VISION ENGINEER – JAN 2023 – AUG 2023

- Performed data preprocessing, feature extraction, and model training, evaluated **model performance** and **applied optimization techniques** for improved accuracy and efficiency.
- Integrated **Deep Learning models** into real-world applications with a focus on **low-resource environments;** collaborated with cross-functional teams to support **AI-based solution development**.
- Developed end-to-end vision based pipelines using **Python** and **pyTorch,** ensuring reproducible results and efficient model deployment.

PUBLICATIONS

2024
Obstalaneyolo: Real-Time Lane and Obstacle Detection for Autonomous Vehicles

14-16 December 2024, Chengdu China

Authors: Majid Manzoor; Jianbo Li; Lvxin Zhou; Aiping Zeng; Muhammad Haider Abbas; Shamas Tabraiz | **Journal Name**: 21st International Computer Conference on Wavelet Active Media Technology | **Publisher**: IEEE

2025
Spatial–Spectral Transformer with Gated Local and Spectral Self-Attention for Hyperspectral Forensic Imaging

ResearchGate (Preprint)

Authors: Muhammad Hassaan Farooq Butt; Bo Peng; Majid Manzoor; Shamas Tabraiz | **Journal Name**: Expert Systems with Applications | **Publisher**: Elsevier

2025
A Wavelet-Enhanced CNN for Robust Hyperspectral Tumor Classification

[Under Review]

Authors: Muhammad Hassaan Farooq Butt; Peng Bo; Majid Manzoor; Rehan Tariq; Farhan Aadil | **Journal Name**: Cluster Computing | **Publisher**: Springer

SKILLS

C++ | Python (computer programming) | PyTorch | TensorRT | ONNX | Docker | Latex/overleaf | Computer Vision

LANGUAGE SKILLS

Mother tongue(s): **URDU**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B1	B2	B2
CHINESE	A2	A2	A2	A2	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PROJECTS

FEB 2024 – CURRENT

Agri-SenseBot: Transforming Manual Farm Vehicles into Autonomous Systems

- Developed an end-to-end vision pipeline for **lane detection**, **obstacle recognition,** and **autonomous navigation** using camera-based input.
- Implemented **trajectory planning** and **GPS-based** navigation, with deployment on low-power **edge devices** to enable **cost-effective** autonomous vehicles and smart farming solutions.
- Utilized deep learning models such as **YOLO** and **Transformers** based architectures, optimized using **ONNX** and **TensorRT** for real-time inference on embedded systems.

Link https://github.com/majidmanzoor170

FEB 2022 – AUG 2022

Real-time Object Detection for Autonomous Driving using Deep Learning (FYP)

- Built a real-time **object detection** system for autonomous driving by implementing and comparing **YOLOv5** and **SSD** architectures on video streams.
- Leveraged the **BDD100K dataset's** 100K video frames and rich annotations across **13 object categories** to train and validate detection models.
- Evaluated on live footage to measure detection consistency and aimed to match the published BDD100K benchmark under diverse driving conditions.

HONOURS AND AWARDS

SEP 2023

Presidential Scholarship (Fully Funded) – Southwest Jiaotong University