



Majid Manzoor

Nationality: Pakistani **Date of birth:** 14/07/2000 **Phone number:** (+86) 13258174461

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Home: Building 11 Southwest Jiaotong University, Pidu District, 611756 Chengdu (China)

ABOUT ME

Computer Vision and Machine Learning **researcher** skilled in deep learning system development and optimization. Expertise in **end-to-end** AI solution deployment with a focus on real-time performance. Seeking a **PhD position** to contribute to artificial intelligence and machine learning applications.

EDUCATION AND TRAINING

Masters of Sciences

Southwest Jiaotong University [09/2023 – Current]

City: Chengdu | Country: China | Website: www.swjtu.edu.cn | Field(s) of study: Computer Science and Technology | Final grade: 3.55/4.0 (CGPA) | Thesis: Enhancing Autonomous Driving with Vision-Based Perception and Trajectory Guidance.

Relevant Coursework: Artificial Intelligence, Advanced Computer Vision, Deep Learning, Pattern Recognition, Robotics.

Bachelor of Science

Mohi-ud-Din Islamic University [2018 – 2022]

City: Niran Sharif, AJ&K | Country: Pakistan | Website: www.miu.edu.pk | Field(s) of study: Computer Science | Final grade: CGPA: 3.73/4.0 (Gold Medalist) | Thesis: Real-time Object Detection for Autonomous Driving using Deep Learning

PUBLICATIONS

[2024]

[Obstalaneyolo: Real-Time Lane and Obstacle Detection for Autonomous Vehicles](#)

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

14-16 December 2024, Chengdu China

[2025]

[Spatial-Spectral Transformer with Gated Local and Spectral Self-Attention for Hyperspectral Forensic Imaging](#)

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

ResearchGate (Preprint)

[2025]

[A Wavelet-Enhanced CNN for Robust Hyperspectral Tumor Classification](#)

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

[Under Review]

PROJECTS

[02/2024 – Current]

Agri-SenseBot: Transforming Manual Farm Vehicles into Autonomous Systems **Lab:** Chinese Research Institute of Land and Big Data (**CRILBD**)

- 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 achieving **35 FPS inference 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.

[02/2022 – 08/2022]

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.

WORK EXPERIENCE

Eziline Software House – Rawalpindi , Pakistan

City: Rawalpindi | Country: Pakistan

Computer vision engineer

[01/2023 – 08/2023]

- Developed and deployed a **end-to-end vision** based pipeline on embedded hardware using **PyTorch**, **ONNX** and **TensorRT**, achieving real-time inference in low-resource environments.
- 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**.

SKILLS

Programming Languages:

Python / C++

Deep Learning Frameworks:

PyTorch / TensorRT / ONNX

Computer Vision Libraries:

PIL / OpenCV / Scikit-image

Tools & Platforms:

Docker / Git / CARLA / Hydra

Research Tools:

Latex/overleaf / Jupyter / Matplotlib / Seaborn / Markdown Docs

LANGUAGE SKILLS

Mother tongue(s): Urdu

Other language(s):

English

Chinese

LISTENING B2 READING B2 WRITING B2

LISTENING B1 READING B1 WRITING A2

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B2

SPOKEN PRODUCTION A2 SPOKEN INTERACTION A2

HONOURS AND AWARDS

[09/2023] Southwest Jiaotong University

Presidential Scholarship (Fully Funded) Awarded a **merit-based** postgraduate **scholarship** in **Computer Science** for academic excellence and research potential.

[08/2023] Mohi-ud-Din Islamic University Narian Sharif

Gold Medal Declared as a **Gold Medalist** in Bachelor of Sciences in **Computer Science** 04 Years (Fall 2018- Spring 2022).

RECOMMENDATIONS

Name: **Mr. Jianbo Li** | Supervisor

Email: 25862827@qq.com | Phone number: (+86) 13881829636

Name: **Dr. Muhammad Hassaan Farooq Butt** | Research Mentor

Email: mubut0522@nmbu.no | Phone number: (+47) 91264507

Name: **Dr Inam-Ullah** | Professor

Email: sahinam@gmail.com | Phone number: (+60) 1140780560