

# MUSAWAR ALI

## Computer Vision Engineer



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📅 15 June 1994

### EXECUTIVE SUMMARY

I did my undergraduate and master's studies in Software/Computer Engineering in Pakistan. In March 2026, I completed my **PhD in Computer Science and Engineering from University of Bologna**. My areas of focus are computer vision, and generative models such as diffusion models and neural radiance fields. I am now seeking opportunities in **Computer Vision and related fields** so as to continue advancing my work in these areas, with a **preference for positions in Italy/Europe**.

### WORK EXPERIENCE

- Nov 2022 - Mar 2026 ● **PhD Researcher**, University of Bologna/EyeCan.AI, Bologna, Italy
- My **research-based PhD** focused on Neural Radiance Fields, diffusion models, and 3D reconstruction. I have completed and published three research projects that concern Industrial anomaly generation, inpainting of nominal images and a benchmark for novel view synthesis of handheld objects.
- Tools & Technologies** I work includes stable diffusion, object pose estimation, Inpainting, Neural Radiance Fields (NeRF), ControlNets, LLMs, object detection, object tracking, object segmentation, OAK-D Lite, Github
- My PhD was co-sponsored by University of Bologna and EyeCan.AI (Spin-off company)** that develops advanced computer vision solutions for client needs, utilizing state-of-the-art techniques. I have worked with EyeCan.AI on several of their projects for example Pirelli on Anomaly Image Synthesis.
- Jan 2020 - Oct 2022 ● **Lecturer, Computer Science**, FAST National National University, Karachi, Pakistan
- FAST-NUCES (National University of Computer and Emerging Sciences)** — *Leading computer science university in Pakistan.*
- Instructor for undergraduate Computer Science courses.
- Jan 2018 - Jan 2020 ● **Graduate Assistant**, Ghulam Ishaq Khan Institute, Topi, Pakistan
- GIKI (Ghulam Ishaq Khan Institute of Engineering Sciences and Technology)** — *Pakistan's primary institution for engineering and technology education.*
- Teaching assistant for undergraduate Computer Science Courses
- Apr 2016 - Dec 2017 ● **Software Engineer**, The Indus Hospital Karachi, Pakistan
- The Indus Hospital** — *Software Engineer*
- Developed and maintained software solutions supporting hospital operations within a non-profit healthcare network in Pakistan.

### EDUCATION

- Nov 2022 - Mar 2026 ● **Phd, Computer Science and Engineering**, UNIVERSITY OF BOLOGNA, ITALY
- Thesis Title: Neural Image Synthesis for Industrial Computer Vision Applications Supervisor: Luigi Di Stefano
- Jan 2018 - Jan 2020 ● **Ms, Computer Engineering** GHULAM ISHAQ KHAN INSITITUTE, TOPI, PAKISTAN
- Jan 2012 - Dec 2015 ● **Bs, Software Engineering** MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY, JAMSHORO, PAKISTAN

### LANGUAGES

Italian ●●●○○○  
English ●●●●●●●●  
Urdu ●●●●●●●●

### AI TECHNIQUES

Computer Vision ●●●●●●●●  
NeRFs ●●●●●○○○  
Diffusion Models ●●●●●○○○  
Pose Estimation ●●●●●○○○

### SOFT SKILLS

C/C++ ●●●●●○○○  
PyTorch ●●●●●○○○  
TensorFlow ●●●●●○○○  
OpenCV ●●●●●○○○

### HONORS & AWARDS

- Fully Funded Scholarship for PhD - 2022 - Cofunded By EyeCan.AI and UniBO
- Fully Funded Scholarship for MS - 2018 - Funded by GIKI, Topi

### PUBLICATIONS

- NVS-HO: A Benchmark for Novel View Synthesis of Handheld Objects ICPR 2026.
- Few-Shot Anomaly Classification by Learning to Inpaint Nominal Images ICIAP-2025.
- AnomalyControl: Few-Shot Anomaly Generation by ControlNet Inpainting IEEE Access-2024.
- A Novel Framework for Generating Handwritten Datasets MTAP-2021.