BHAVIK SHANGARI

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SUMMARY

Research and Industry experience across Computer Vision, Robotics, and Multimodal Large Language Models (LLMs) and Medical Foundation Models. Skilled in deep learning, edge deployment, and real-time AI systems. Passionate about building intelligent multimodal systems that connect perception and language.

EDUCATION

B.Tech in Data Science and Artificial Intelligence — Graduating Expected May 2026
Indian Institute of Technology (IIT) Bhilai, India — GPA: 8.77 / 10.0

Relevant coursework: Machine Learning, Advanced ML, NLP, Adversarial ML, Robotic Systems, Data Structures & Algorithms

TECHNICAL SKILLS

Languages: Python, C,
Frameworks & Libraries: PyTorch, TensorFlow, Keras, Transformers, Torchvision, OpenCV, scikit-learn, ROS2
ML Concepts: Vision-Language Models, LLMs, GANs, Reinforcement Learning, Self-Supervised Learning
Tools & Deployment: Docker, ONNX, TensorRT, Streamlit, Linux, Git

PUBLICATION

TechING: Towards Real World Technical Image Understanding via VLMs — Accepted (EACL 2026)
with Dr. Ashutosh Modi & Dr. Gagan Raj Gupta Paper

PROFESSIONAL EXPERIENCE

National University of Singapore, Singapore: Visiting Scholar, Dr Dianbo Liu — May 2025 – Present

- Built an anomaly-aware retinal foundation model using self-supervised learning and validated its representations through extensive linear-probing and finetuning benchmarks beating state-of-the-art methods.

Assurant (Fortune 500), Atlanta, GA / Remote: AI / Data Science Intern — May 2025 – Jul 2025

- Built components of a multi-agent multimodal system integrating last-mile logistics data for predictive AI.

KEY PROJECTS

Jetson-VLM – Lightweight Multimodal Vision-Language Model — 2025
Developed and fine-tuned a DinoV2 + SigLIP + LLaMA 3.2 (1B) model optimized for Jetson Nano. (**GitHub**)

Jetson-VLA – Vision-Language Action Foundation Model for Robotics — 2025
Implemented OpenVLA approach to train manipulation policies on Bridge Data V2. (**GitHub**)

CloudPhysician – AI-Based Patient Monitoring — 2024
Built vision pipeline for vital-sign extraction from CCTV feeds using YOLO + OCR. (**GitHub**)

Gesture-Controlled Robotic Arm — 2023
Built robotic arm and computer-vision pipeline to mirror human hand movements for assistive control. (**GitHub**)

ACHIEVEMENTS

IIT Bhilai's Young Researcher Award: Awarded for my Accepted Research Paper in EACL conference.
International RoboCup Challenge (2024): All-World Rank 6 – Finalist Round
Drishti Fellowship – TIH IIT Indore (2023): Awarded for developing a smart physiotherapy device for Trismus treatment
Competitive Exams: JEE Advanced AIR 3989 (2022), JEE Mains AIR 4160 (99.55%), Qualified KVPY

LEADERSHIP & ACTIVITIES

Coordinator – Data Science & AI Club, IIT Bhilai — Apr 2024 – Apr 2025
Organized AI workshops and technical events promoting student research projects.