

Arnav Devalapally

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EDUCATION

University of Michigan

Ann Arbor, MI

Master of Science in Computer Science and Engineering

Dec 2026

- GPA: 4.00/4.00
- Coursework: Advanced Computer Vision • Robot Kinematics and Dynamics • Randomness and Computation • Control Systems Analysis and Design • Microarchitecture • Information Theory

K L University

Hyderabad, India

Bachelor of Technology (Honors) in AI and Data Science, Specialization in Perception and Language

May 2025

- GPA: 9.82/10.00 (Silver Medal)

SKILLS

Programming: Python • PyTorch • NumPy • OpenCV • C++ • CUDA (intro) • ROS2 (intro)

Tools: Linux/Bash • SLURM • Docker • AWS (EC2, S3, Lambda) • FastAPI • Git

RESEARCH EXPERIENCE

Indian Institute of Technology Hyderabad (IIT-H)

Hyderabad, India

Computer Vision Research Intern

May 2024 - Present

Advisor: Prof. Vineeth N Balasubramanian | ACM IKDD Fellow

- Demonstrated that domain-adapted deep learning models retain source-exclusive classes even when target data lacks corresponding samples, exposing a privacy vulnerability in existing methods.
- Developed an adversarial optimization method in PyTorch that synthesizes oracle “source-only” class samples, evolving them toward the target domain while enforcing selective forgetting.
- Conducted extensive ablation studies and validation analyses across six datasets and five metrics, supported by theoretical observations.
- First author on paper submitted to CVPR 2026.

Indian Institute of Information Technology Hyderabad (IIIT-H)

Hyderabad, India

Computer Vision Research Intern

May 2023 - July 2023

Advisor: Prof. Ravi Kiran Sarvadevabhatla

- Designed and implemented text-line segmentation pipelines using classical computer vision algorithms for degraded and well-preserved rock scriptures.
- Curated and annotated a labeled text binarization dataset of rock scriptures (40 images), with varying degradation and noise conditions.
- Optimized state-of-the-art deep learning document binarization model by introducing Focal Loss, improving PSNR.

PROJECT EXPERIENCE

2D Parabolic Trajectory Estimation

- Developed a real-time computer vision-based parabolic trajectory prediction system using image processing and motion modeling.

Novel Object View Synthesis

Advanced Computer Vision (EECS 542) Project

- Built 3D object representations and synthesized novel views using Neural Radiance Fields (NeRF) for 3D scene reconstruction from sparse multi-view images.

ACTIVITIES

Autonomous Robotic Vehicle Team (UMARV), *Member*

Jan 2026 - Present

TEQQ Televisors Robotics Team, *Founding Member*

Jan 2016 - Oct 2020

- Won 15+ awards, including 4 world championship titles in competitive robotics