Pranav A R

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Education

- **Gitam (Deemed) University** — Visakhapatnam, India
  Bachelor of Technology - Computer Science and Engineering — *Sep 2022 - Ongoing*
- **Kendriya Vidyalaya No.2** — Mangaluru, India
  Intermediate - PCMC — *Aug 2020 - May 2022*

Skills Summary

- **Core Expertise**: Deep Learning, Applied Machine Learning, End-to-End ML Pipelines, Model Training
- **Programming**: Python, SQL, Bash, C/C++, HTML, Rasterio, GDAL, Geopandas
- **ML ops & Cloud**: GCP, Vertex AI, Model Deployment, Experiment Tracking, APIs, Apache
- **Deep Learning**: Tensorflow, Tensor-RT, Transfer Learning, Neural Networks
- **Data & Analytics**: ETL Pipelines, Time-series Analytics, Data Handling and processing for Machine Learning, GIT, Docker, QGIS
- **Computer Vision**: OpenCV, YOLO, PointNet, Lidars, Remote Sensing
- **Systems**: GPU acceleration(CUDA), Linus, WSL2
- **Leadership**: Technical Leadership, Project Management, Cross-Functional Team Collaboration, Club Management

Experience

- **TechBharat AI** — On-Site
  AI Researcher (Part-time) — *Sept 2025 - Present*
  - **Computer Vision Systems**: Designed and optimized object detection and re-identification pipelines using YOLO focusing on real world deployment
- **University of Kerala, Trivandrum** — On-Site / Remote
  Research Intern (Hybrid) — *Jul 2025 – Present*
  - **Designed and implemented** : Developed an end-to-end deep learning pipeline for large-scale geospatial and time-series data, integrating satellite imagery and terrain features to analyze regional risk patterns and deployed using GCP.
- **Indian Institute of Space Science and Technology** — On-Site
  Intern (Full-time) — *Jun 2024 - Jul 2024*
  - **Depth-Based FER**: Worked at CVVR Lab under Dr. Deepak Mishra on Depth-Based Facial Expression Recognition using **PointNet** and **CNNs**.
- **Indian Institute of Space Science and Technology** — On-Site
  Intern (Full-time) — *May 2023 - Jul 2023*
  - **LiDAR Processing**: Developed integration and preprocessing techniques for depth perception and point cloud extraction with **Intel LiDAR cameras** in **Python**.
- **AeroGitam (Co-curricular Expertise)** — Visakhapatnam, India
  President (Part-time) — *May 2024 - June 2025*
  - **Club Management**: Led UAV and LiDAR projects, organized technical events, and collaborated with alumni and faculty for funding and outreach.

Projects

- **Citizen Facility Monitoring System**: Enterprise-grade computer vision system using CCTV feeds to analyze customer flow, staff activity and operational efficiency thorugh automated analytics.
- **UAV for Terrain Mapping**: UAV with LiDAR for terrain mapping and point cloud acquisition, integrated with **Raspberry Pi 4** and **Intel Realsense**.
- **Geospatial Risk Prediction System**: Deep Learning pipeline leveraging satellite
- **Facial Expression Recognition Using Depth and PointClouds**: **CNN + PointNet** trained on AffectNet for emotion classification.
- **Digital AI Twin for Student Experience Management**: AI-powered digital twin platform using predictive analytics and reinforcement learning to personalize student experience; presented as a poster at an academic symposium.

Certifications

- **AI Infrastructure and Operations Fundamentals**: Nvidia
- **The Fundamentals of RDMA Programming**: Nvidia
- **Modern Robotics: Mechanics, Planning, and Control Specialization**: Northwestern University
- **Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization**: DeepLearning.AI
- **Machine Learning with Python**: IBM AI Engineering
- **Python Project: Pillow, Tesseract and OpenCV**: University of Michigan
- **Visual Perception for Self-Driving Cars**: University of Toronto