K HARI KRISHNA

Computer Vision Engineer

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SUMMARY

Computer Vision Engineer with practical experience in real-time image and video processing. Skilled in integrating pretrained deep learning models, optimizing inference pipelines, and reducing system latency through scalable and efficient engineering practices. Proven ability to modernize traditional computer vision workflows into high-performance, resource-conscious systems using tools like **Docker**, **Pillow**, **OpenCV**, and **Python multiprocessing**—without deep modifications to core deep learning frameworks.

PROFESSIONAL EXPERIENCE

Computer Vision Engineer   Feb '23 — Present
ZestloT Technologies Pvt Ltd.   Hyderabad, India

- Promoted from intern to full-time engineer after demonstrating consistent contributions to **high-impact R&D** and **production-level computer vision solutions**.
- Enhanced the company's AI platform by integrating **YOLOv7-based detection and segmentation**, leading to improved detection accuracy and faster decision-making in critical workflows.
- Optimized **YOLOv7-based detection** and **segmentation models** using **NVIDIA TensorRT**, improving inference speed by **2×** and reducing GPU memory utilization by **50%**.
- Conducted extensive bench-marking across model variants and input resolutions to evaluate **accuracy vs. performance trade-offs** in real-world scenarios.
- Improved system performance by replacing **OpenCV with Pillow**, resulting in **50% faster** processing speeds and **50% lower** CPU and RAM utilization.
- Developed a containerized **image augmentation microservice** using **Docker**, integrated it with the **MLOPS platform**, and automated preprocessing for large-scale training and inference tasks.
- Resolved a multiprocessing issue where **multiple models failed to load** in a single script, enabling **parallel model inference** in a unified runtime.
- Debugged and resolved **library/package conflicts** to support **simultaneous execution of detection and segmentation models** in a single container, reducing **deployment complexity**, **startup time**, and **memory usage**.

EDUCATION

Bachelor in Computer Applications, Government Degree College (GPA: 7.8)   Jan '19 — Sep '22
                                                                                               Hyderabad, India

ACHIEVEMENTS

Innovator of the Month
Successfully optimizing platform components and contributing impact R&D solutions.

PROJECTS

Dataset Analyzer CLI Tool Link
- Created a lightweight CLI wrapper over the data-gradients library to analyze YOLO-format datasets.
- Automated generation of dataset health reports, enabling quick identification of class imbalance and annotation errors before training.

SKILLS

Programming Languages   Python, C++
Modeling and Integration   TensorRT, YOLOv7
Libraries and Frameworks   OpenCV, Pillow, FFmpeg, MediaMTX, PyTorch, Django
Systems and Tools   Docker, RabbitMQ, Redis, Git, Label Studio
Performance Optimization   Parallel Processing, Real-Time Pipeline Efficiency
Version Control   Git