

SANJAY PRABHAKAR

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Education

Northeastern University

GPA-3.87 Sept. 2022 – Dec. 2024

Master of Science in Artificial Intelligence (Khoury College of Computer Sciences)

Boston, Massachusetts

Related Courses: Large Language Models, Robotic Science Systems, Foundations of Artificial Intelligence, Computer Vision, Machine Learning, Remote Computer Vision

BMS Institute of Technology

GPA-3.3 Aug. 2018 – Jun. 2022

Bachelor of Engineering in Computer Science

Bangalore, India

Related Courses: Artificial Intelligence & ML, Advanced Engineering Mathematics, Data Structures, Algorithm Analysis, Computer Graphics, Remote Computer Vision

Technical Knowledge

Languages: Python, Java, C++, C, SQL

Databases: MySQL

Skills: Computer Vision, Stereo Vision, CNN, Machine Learning, Deep Learning, Remote Computer Vision

Libraries: PyTorch, Keras, TensorFlow, Scikit-Learn, DepthAI

Certifications: OpenCV for Python, Modern Computer Vision (PyTorch, TensorFlow, Keras), Nvidia Deep Learning (DLI), Remote Computer Vision

Experience

Agot AI

August 2023 – December 2023

Remote Machine Learning Intern

Pittsburgh, Pennsylvania

- Led the development and successful launch of an innovative food waste management product, utilizing a novel ML algorithm for data forecasting and vision data, achieving a 50% reduction in wastage. This role involved overseeing the entire product lifecycle from concept to deployment on the edge.
- Developed an action recognition pipeline using Generative and Discriminative Learning Models for restaurant behavioral analysis.

Agot AI

May 2023 – August 2023

Remote Computer Vision Intern

Pittsburgh, Pennsylvania

- Optimized segmentation models with Nvidia TAO & Deepstream, improving IOU by 20% and deployed on Nvidia Xavier & Orin.
- Integrated visual language models such as **GPT-4V** and **LLaVa** into computer vision pipelines, enabling multimodal understanding and enhancing complex scene interpretation accuracy by 30%.
- Trained transformer-UNet based segmentation and detection models on AWS Sagemaker, PyTorch and deployed on Kubernetes cluster using Argo CD and Docker for automated deployment.

Green Robot Machinery (Grobomac)

June 2021 – December 2021

Remote Computer Vision Intern

Bangalore, Karnataka

- Developed & deployed real-time depth estimation and object tracking for autonomous cotton-harvesting robots using Python, C++, OpenVino, and DepthAI.
- Evaluated edge devices like Nvidia Jetson series & OAK-D for cost and performance.
- Boosted FPS by 40% with a neural model, reducing compute resources by 50%.

Projects

Alzheimer's Detection Using Vision Transformers | *Python, PyTorch, ViT*

March 2024

- Pretrained Model Integration:** Utilized the pretrained ViT-B16 weights for deep learning.
- Diagnostic Classification:** Developed capabilities for the transformer to classify the level of dementia from MRI scans.
- Data Handling:** Trained the Vision Transformer (ViT) on MRI scans from patients with varying levels of dementia.

Latent Diffusion Based Image Enhancer | *Python, OpenCV, PyTorch*

June 2023

- Advanced Enhancement:** Integrated a latent image diffusion model for superior image quality.
- Practical Application:** Designed for optimizing, refining, and latent upscaling images captured on smartphones.