MEET PANDYA

Computer Vision Engineer

Leading AI initiatives from vision research to product deployment at scale.

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CAREER SUMMARY

AI Engineer with 4 years' experience building, optimizing, and leading computer vision products from research to deployment. Skilled in technical leadership, product-driven development, and scaling ML systems across Python, C++, and CUDA platforms.

CORE TECHNICAL SKILLS

Programming Languages: Python, C++, Shell Scripting

Frameworks/Libraries: PyTorch, OpenCV, NumPy, Pandas, CUDA Programming

Computer Vision: Image Registration, Depth Estimation, Stereo Calibration, 3D Reconstruction, Image Segmentation, Anomaly Detection

Deep Learning: CNNs, Self-Supervised Learning (SSL), Transfer Learning

Tools: Git, Linux, Anaconda, Docker | **Database:** PostgreSQL

PRODUCT AND LEADERSHIP SKILLS

Team Leadership: Mentoring Junior Engineers, Technical Guidance, Cross-Functional Collaboration

Product Thinking: Defining Product Requirements, Prioritizing Features Based on Business Needs

Project Management: Sprint Planning, Deliverable Tracking, Technical Documentation

Problem Solving: Failure Analysis, Root Cause Identification, Continuous Improvement Initiatives

EDUCATION

MASTER'S DEGREE
Software Systems | DA-IICT 2019 – 2021

BACHELOR'S DEGREE
Computer Engineering | Ganpat University 2015 – 2019

CERTIFICATES

IBM Data Science Specialization - Coursera

DeepLearning.AI Deep Learning Specialization - Coursera

IIIT-H CVIT Summer School of AI

THESIS

Indoor Localization and Crowd Behavior Sensing | Aug 2020 – Jun 2021

- Engineered WiFi-based indoor positioning and behavior sensing framework using real-world datasets and custom-built data collection tools.
- Modeled and visualized dynamic crowd behavior patterns for applications in safety planning, trend analysis, and mobility optimization.

PROFESSIONAL EXPERIENCE

COMPUTER VISION ENGINEER – L2

Vehant Technologies | Noida, UP, India June 2021 – present

Led the design and deployment of multiple computer vision modules for Under Vehicle Scanning Systems (UVSS), including car model detection, automatic masking, and false positive reduction, improving system accuracy and reliability.

- Spearheaded **depth estimation** initiatives, **stereo calibration** workflows, and **3D reconstruction** pipelines, enabling more precise vehicle profiling under challenging real-world conditions.
- Directed failure case analysis and data-driven accuracy improvement efforts, coordinating closely with research leadership and product teams to align solutions with business requirements.
  [Reduced false positives by 20-25%, Increased Threat detection rate by 15-20%]
- Managed **client-server model deployments** involving multi-model orchestration, **CUDA-based inference optimization**, and real-time system performance tuning.
  [Managed deployment of 3+ models of different modality across multiple clients]
- Mentored research interns for **Monocular depth estimation**, **Synthetic data generation**, and **point cloud refinement**, plus model training best practices and research prioritization frameworks., and junior engineers on software debugging (e.g., memory leak detection, etc.).
- Contributed to product strategy by analyzing hardware-software trade-offs, suggesting hardware upgrades, and evaluating model integration feasibility for next-gen UVSS platforms.
- Contributed to streamlining recruitment and onboarding process via resume shortlisting and planning induction.

TEACHING ASSISTANT

DA-IICT | Gandhinagar, Gujarat, India Aug 2019 – Mat 2021

Assisted in teaching Computer Architecture and Linux Systems; conducted tutorials, supervised labs, and mentored students on system programming and operating systems concepts.

PUBLICATIONS

- DepScan: 3D Under Vehicle Scanning System [link]
- Segregating and Recognizing Human Actions from Video Footages Using LRCN Technique [link]