SHUBHAM CHAUDHARI

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TECHNICAL SKILLS

Languages : Proficient: Python, Learner: JavaScript, React, HTML/CSS
ML/DL Frameworks : TensorFlow, Keras, PyTorch, Onnx, Nvidia
LLM Development : Custom LLM Training, RAG Pipeline, Azure OpenAI
DevOps : Git, Docker, FastAPI, Flask, Streamlit
Core Expertise : AI/ML, Machine/Computer Vision, Transformers, Generative AI, OpenCV, Image Processing

EDUCATION

University of Southern California California
Master of Science January 2025-December 2026

- CSCI 570: Analysis of Algorithm, DSCI 552: Machine Learning for Data Science

EXPERIENCE

HERE Solutions | Tech. Innovation Lab Mumbai, India
AI ML Engineer II August 2024-December 2024

- Applied LLMOps and Built RAG-based LLM pipeline applying LangChain to auto-generate code and docs for internal Java SDKs
- Accelerated efficient knowledge retrieval using RAG + vector DBs, boosting dev productivity by 30%, decreasing ticket backlog
- Designed scalable AI/ML components; optimized data loaders to reduce latency by 50+%, boost accuracy in enterprise models
- Architected scalable GenAI system, custom chunking to re-ranking strategies, enhancing processing efficiency by 40%

Tata Consultancy Service | RSI Nucleus Lab Mumbai, India
AI ML Engineer July 2021-July 2024

- Developed and deployed computer vision-based cashier-less retail solutions for Autonomous Store, Smart Cart, and Freshness Monitoring, improving real-time item recognition accuracy by 30% further optimizing for IoT hardware
- Reduced shelf replenishment and spoilage delays by 60+%, diminishing checkout times by more than 80%, and driving significant increase in operational efficiency
- Led 'TechFM' knowledge-sharing initiative, conducting hands-on workshops on AI/ML Frameworks and OpenCV. Developed educational content increased student engagement by 40%, upskilling 400+ professionals in tech industry and 1000+ students

Tata Consultancy Service | Life Science Mumbai
Data Scientist Intern February 2021-May 2021

- Implemented ML models for Signal Detection and Signal Management in Materiovigilance, applying scikit-learn for pattern recognition techniques (e.g., Lasso, XGBoost) to analyze data enhancing early detection of adverse events by 25%
- Led development of an analytics dashboard by integrating AI models with unstructured MongoDB data, utilizing Python, Pandas. Enabled data-driven insights, reducing decision-making time and improving healthcare professionals response time

PROJECTS

Home Automation | Linux, ESP32, Cloudflare January 2023-December 2023

- Architected and built self-hosted automation platform combining IoT hardware, video streaming, file backup, and network security solutions, creating 100% secure and a innovative comprehensive home automation ecosystem with remote access

Monocular Depth Estimation | Python, CV/AI/ML, Visualization January 2021-June 2021

- Engineered pipeline utilizing PyTorch, OpenCV, and custom deep learning models (U-Net), trained on large-scale KITTI and Cityscapes datasets, building 3D scene reconstruction. Reduced processing latency by 50% using TensorRT for inference

Automated Vaccine Slot Detection | Data Eng., API, JS March 2021-April 2021

- Engineered system for real-time data processing and notifications using Python, integrating multiple APIs for comprehensive data collection with custom filtering algorithms for notification, slot detection and booking automation

PUBLICATIONS AND PRESENTATIONS

- Conducted research and published a international whitepaper: "A Hybrid approach towards Signal Management in PV"
- Authored and presented research paper - "A Synopsis of Monocular Depth Estimation" at ICDSMLA, published by Springer

AWARDS AND RECOGNITIONS

- Recognized with multiple prestigious awards, including the AIP Anchor Award, Innovista Sparkles, Innovista Top Seeds, CLP Faculty Award, and BPS Champions League Runner-up, for outstanding contributions to AI/ML innovation