

Dhairya Kalathia

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EXPERIENCE

TATA ADVANCED SYSTEMS LTD.

AI/ML PROJECT INTERNSHIP | FEB 2025 – MAY 2025

- **AI-Driven Predictive Maintenance** – Developed machine learning models (RNN-LSTM, ANN, RandomForestClassifier) to predict failures and detect anomalies in defense systems using IoT sensor data.
- **Real-Time Data Processing** – Designed frameworks for analyzing high-frequency IoT sensor streams, enabling mission-critical diagnostics and system optimization.
- **Secure AI Solutions in Defense** – Gained hands-on experience in AI-driven defense applications, ensuring secure, resilient, and data-driven decision-making at Tata Advanced Systems.

VALUEYE TECHNOLOGIES PVT. LTD.

ML INTERNSHIP | DEC 2024 – FEB 2025

- **AI-Powered Virtual Try-On System** – Developed a real-time garment fitting solution using machine learning models like DensePose, OpenPose, and SChP for accurate human segmentation and clothing overlays.
- **Optimized Backend for E-Commerce** – Engineered a FastAPI-based backend to enhance API performance and ensure seamless integration with online shopping platforms.
- **Enhanced Visual Realism with AI** – Leveraged Stable Diffusion Inpainting and pre-trained AI models to refine garment placement, improve visual realism, and optimize performance on high-performance GPUs.

PROJECTS

STOCK PRICE PREDICTION USING LSTM NEURAL NETWORKS

SELF-LEARNING PROJECT | SEPT 2024 – Nov 2024

- **Stock Price Prediction with LSTM** – Developed an LSTM neural network for accurate stock market forecasting, improving decision-making for investors.
- **Data Optimization & Visualization** – Enhanced model performance through data preprocessing and created 3D visualizations for better trend analysis and financial insights.

AI BASED NUMBER PLATE DETECTION

SELF-LEARNING PROJECT | Nov 2023 – Dec 2023

- **AI-Powered Vehicle Detection & Recognition** – Developed a high-accuracy traffic monitoring system using Python, OpenCV, and YOLOv7 for real-time vehicle detection and number plate recognition.
- **Scalable & Efficient Deep Learning Models** – Implemented advanced computer vision techniques to ensure reliable, real-time processing and improve accuracy in traffic monitoring.

EDUCATION

SAFFRONY INSTITUTE OF TECHNOLOGY (GTU)

COMPUTER ENGINEERING, CGPA: 8.41 / 10.0

Mehsana, Gujarat, 2021- 2025

PACE JUNIOR SCIENCE COLLEGE (HSC)

PCM SCIENCE, RESULT: 86.17 %

Mumbai, Maharashtra, 2019-2021

SKILLS

- **PROGRAMMING LANGUAGE** - Python
- **TOOLS & PLATFORMS** - GitHub, Hugging Face, Google Colab
- **DEEP LEARNING** - Neural Networks, Object Detection, Transfer Learning, Transformer, YOLO
- **MACHINE LEARNING** - k-means Clustering, KNN, SVM, Regression, Boosting, Decision Trees, RandomForestClassifier
- **LIBRARIES** - Numpy, Pandas, Scikit-learn, Tensorflow, Keras, PyTorch, OpenCV, MediaPipe, Matplotlib, Seaborn, FastAPI, Gradio