AI/ML | Deep Learning Enthusiast

Pawar Shubham

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AI/ML fresher with hands-on experience in machine learning, deep learning, and computer vision.

Skilled in Python, TensorFlow, PyTorch, and data preprocessing. Excited to use AI to solve real-world problems.

Currently researching and authoring a research paper on AI and Computer Vision for Better Traffic Control Management

Education

B.E. COMPUTER ENGINEERING 2022-2025
LDRP Institute of Technology and Research – Gandhinagar
CGPA :- 7.8

DIPLOMA COMPUTER ENGINEERING 2019-2022
Government Polytechnic – Ahmedabad
CGPA :- 9.2

Technical Skills

- **PROGRAMMING:** PYTHON, JAVASCRIPT, SQL
- **MACHINE LEARNING & AI:** NUMPY, PANDAS, SCIKIT-LEARN, OPENCV
- **DEEP LEARNING:** TENSORFLOW, KERAS, PYTORCH, NEURAL NETWORKS, CNN, RNN, YOLO
- **DATA SCIENCE:** FEATURE ENGINEERING, MODEL TRAINING, OPTIMIZATION
- **DEVOPS & DEPLOYMENT:** DOCKER, KUBERNETES, FLASK, REST APIS
- **IOT & NETWORKING:** RASPBERRY PI, ESP32, ESP8266, MICROPYTHON
- **FRONT-END:** REACT, REMIX, REACT NATIVE, HTML, CSS

Soft Skills

- Research & Development
- Debugging & Troubleshooting
- Analytical Skills
- Adaptability & Learning Agility
- Technical Writing
- Effective Communication

Experience

Full Stack AI Engineer - Persist Ventures Apr 2025 – Present

- Created and integrated multiple object detection and tracking models.
- Implemented real-time human pose detection in a React frontend using MediaPipe's heuristic pose estimation.
- Processed and transmitted landmark data to a Python backend for advanced analysis and response handling.
- Built a seamless client-server architecture enabling efficient and scalable human movement tracking.
- Creation and handling of FastAPI for data communication.
- Development of webtools in Remix/TypeScript.

Python Developer Intern - CloudSpikes MultiCloud Solutions Nov 2024 – Dec 2024

- Built and implemented API applications using Python and Flask.
- Containerized applications using Docker and deployed them in Kubernetes clusters.
- Implemented Automations in DevOps tasks.

Python Intern - Infolabz May 2021 – Jun 2021

- Implemented Python testing.
- Parsing JSON formats.
- Integrated backend API development.

Projects

DYNAMIC TRAFFIC CONTROL SYSTEM (DTCS) – AI BASED TRAFFIC MANAGEMENT

Designed an AI system for real-time vehicle recognition from live camera feeds.
Integrated AI/ML with IoT devices for dynamic traffic signal adjustments.
Integrated image preprocessing and feature extraction to enhance model precision.
Improved the deep learning model for low-latency inference on edge devices.
Designed scalable architecture for integration with smart city infrastructure.
Integrated AI/ML with IoT devices for dynamic traffic signal adjustments.

Tech Stack Python, Deep Learning, TensorFlow, open-cv, NumPy, etc.

Vehicle Counting and Speed Estimation

Built a Python script to count vehicles and estimate speed from video frames.
Used YOLOv8 for vehicle detection and a centroid tracking algorithm.
Calculated speed based on frame rate and reference distance.
Refined the model to ensure seamless real-time processing in video streams.

Tech Stack Python, Object Tracking, YOLO, Deep Learning, ultralytics, open-cv, NumPy, etc.

SkyChords - AI Music Generator

Created an AI-driven melody composition algorithm with a 90% accuracy rate.
Integrated MIDI file creation and audio streaming to enhance user experience.
Applied deep learning techniques for recognizing musical patterns.
Designed a React Native UI for seamless user interaction.
Enhanced the algorithm to deliver instant music recommendations.

Tech Stack Python, React Native, Flask - APIs, Deep Learning, Pytorch, open-cv, NumPy, etc.

Phishy – ML based Phishing Website Detection

Built a phishing detection model with 92% accuracy using feature extraction.
Collected and preprocessed data from multiple online sources.
Utilized Random Forest and Decision Tree classifiers to detect phishing patterns.

Tech Stack Python, Machine Learning, Random Forest, Pandas, etc.

Accomplishments

Research Paper Published
Published research on dynamic traffic control and emergency vehicle prioritization in a Springer journal.

Funding Award
Received Fundings of ₹90K for DTCS project from KSV SSIP CELL.

Expo Winner
Secured 1st place at project expo 2022 held at government Polytechnic – Ahmedabad

Data Science Certification
Completed 4-week course of Python for Data Science provided by NPTEL.

Links

LeetCode GitHub LinkedIn