ATHARVA MANDAVKAR

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EDUCATION

B.Tech in Electronics and Communication Engineering　　　　　　　　　　**Jun 2021 – Mar 2025**
Dr Vishwanath Karad MIT World Peace University, Pune　　　　　　　　　　　　**CGPA: 8.85/10**

TECHNICAL SKILLS

Languages: Python, C/C++, MATLAB, R, JavaScript, HTML/CSS
AI/ML: PyTorch, TensorFlow, YOLOv8, OpenCV, HuggingFace, ViViT, LSTM, TCN, N-BEATS, scikit-learn
Cloud/DB: AWS DynamoDB, MySQL, MongoDB, PythonAnywhere
IoT/Embedded: Raspberry Pi, STM32, Arduino, Modbus, MQTT
Tools: Git, Docker, Jupyter, VS Code, Postman, Tableau, Android Studio

PROFESSIONAL EXPERIENCE

Machine Learning Intern | *Spordia Softech*　　　　　　　　　　　　　　**Jun 2024 - Dec 2025**
- Developed sports action analysis system using multiple deep learning architectures for real-time activity recognition
- Implemented and compared CNN, RNN, and Transformer-based models achieving 91% classification accuracy
- Optimized video processing pipeline for frame extraction and feature engineering from sports footage

Machine Learning Intern | *Elevate Labs*　　　　　　　　　　　　　　　**Nov 2025 - Dec 2025**
- Built stock price prediction models using LSTM, Temporal Convolutional Networks (TCN), and N-BEATS architectures
- Conducted comparative analysis of time-series forecasting models, achieving RMSE improvement of 23% with N-BEATS
- Engineered features from financial data including technical indicators and market sentiment analysis
- Developed end-to-end pipeline for data preprocessing, model training, and backtesting strategies

Embedded Systems Engineer | *Atlas Copco Project*　　　　　　　　　　　**Feb 2024 – Jun 2024**
- Engineered Datalogger system for mining trucks using Modbus TCP/IP and MQTT protocols for sensor monitoring
- Integrated STM32 and Raspberry Pi for real-time data acquisition and cloud-based analytics with MySQL
- Designed RESTful APIs for remote monitoring, improving operational efficiency and data accessibility

KEY PROJECTS

Smart Crime Detection using CCTV | *eYantra Challenge – Best Implementation Award Winner*
- Won Best Implementation Award at National Finals for crime prevention solution using Vision Transformers
- Architected centralized database with AWS DynamoDB and MongoDB for multi-authority access
- Built cross-platform alert system with Twilio integration and Android app for law enforcement notifications

Stock Price Prediction System | *Advanced Deep Learning Application*
- Built production-ready stock prediction platform with 6 deep learning models (LSTM, Attention-LSTM, N-BEATS, TCN, Transformer, Ensemble) using PyTorch 2.x with GPU acceleration
- Engineered comprehensive analytics with 20+ technical indicators, real-time monitoring, and Google Finance-style interface,interactive dashboards with pattern recognition, risk metrics (VaR, Sharpe ratio), and virtual portfolio tracking

Real Estate Property Management Platform | *Full-Stack Web Application*
- Developed full-featured real estate platform with Flask and SQLAlchemy featuring property CRUD, booking system, and admin dashboard
- Implemented secure file uploads, email notifications (enquiries, bookings, alerts)
- Built advanced filtering, analytics visualization, and role-based access control for administrators and end-users

Sign-to-Text Language Translator | *Accessibility Project*
- Built real-time sign language translation pipeline using MediaPipe and Conv1D neural network with 94% accuracy
- Integrated text-to-speech conversion with gTTS and word suggestion engine for enhanced accessibility

Additional Projects: E-Waste Segregation with YOLOv8 (89% mAP, Raspberry Pi deployment), Secure Vault Pro (AES- 256 encryption, steganography), NAS Network Attached Storage, Web AirDrop (WebRTC P2P file sharing)

ACHIEVEMENTS

- **Gold Level & Top 20% Globally** – WorldQuant IQC 2025, Rank 318/8,818 globally, 82nd/2,218 in India
- **Best Implementation Award** – eYantra Innovation Challenge 2023-24 National Finals　　　　Apr 2024
- **National Finalist** – Smart India Hackathon 2023, Ministry of Railways　　　　　　　　　　Oct 2023
- **Winner** – MIT World Peace University HackMITWPU Workathon　　　　　　　　　　　　Mar 2024

PATENTS & PUBLICATIONS

AI Driven Crime Detection using Existing CCTV Networks — Indian Patent, Application No. 202521121962 | Published: 16 Jan 2026 (Pub. No. 03/2026) | IPC: H04N 7/18, G08B 13/196, G06N 3/04
Applicant: Dr. Vishwanath Karad MIT World Peace University, Pune | Co-inventors: Anuradha C. Phadke, Prathamesh Dalal, Atharva Mandavkar, Jignesh Shah, Shreerang Mhatre

CERTIFICATIONS

Quantitative Finance Starter Level – WorldQuant BRAIN | **Fundamentals of Deep Learning** – NVIDIA DLI
AWS Academy Cloud Foundations – AWS Academy | **TinyML on Low Power Devices** – ICTP
Robotics & IoT Immersion – NITTTR Bhopal