Prathamesh Nikam

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Technical Skills

Languages: Python, Java, C++, PHP, JavaScript, TypeScript, SQL, Kotlin
ML/AI: PyTorch, TensorFlow, Scikit-learn, XGBoost, Keras, NLTK, SpaCy, OpenAI Whisper, LangChain, Ray
Web/Mobile: FastAPI, Gradio, Android SDK, Unity3D, Vuforia AR
Cloud & Tools: GCP (Cloud Run, Vision API), Docker, Git, MySQL, SQLite, MongoDB, Linux

Projects

HQDE - Hierarchical Quantum-Distributed Ensemble Learning | *Python, PyTorch, Ray, PyPI* **Dec 2025**

- Published production-ready PyPI package combining quantum-inspired algorithms (superposition aggregation, entanglement-based correlation) with Ray-based distributed computing for ensemble machine learning.
- Implemented Byzantine fault tolerance, MapReduce weight aggregation, and adaptive quantization achieving reduced memory usage across MNIST, CIFAR-10, SVHN benchmarks.

Neural Consensus Engine | *Python, FastAPI, Google Gemini, GCP Cloud Run* **Dec 2025**

- Built advanced Mixture-of-Experts (MoE) AI system with Google Gemini 1.5, orchestrating specialized agents (Creative, Logical, Ethical) for consensus-based responses with meta-cognitive synthesis.
- Deployed on GCP Cloud Run with interactive process graph visualization and real-time agent configuration modals.

F1 Race Position Predictor | *Python, Scikit-learn, XGBoost, Pandas, Gradio* **Dec 2025**

- Built ML pipeline predicting F1 race positions using GradientBoostingRegressor with rich feature engineering (historical performance, qualifying times Q1/Q2/Q3, sprint results, driver attributes).
- Developed interactive Gradio web UI with real-time MAE and R^2 analytics using Ergast F1 API datasets.
- Implemented data preprocessing pipeline handling 1000+ races, driver statistics normalization, and automated feature extraction from raw telemetry data.

Multi-Modal Data Curation System | *Python, Google Cloud Vision/Translation API, Whisper* **June 2025**

- Engineered automated system processing audio, video, images via Whisper and Google Vision OCR, curating multi-lingual datasets for benchmark design with OpenCV and Pandas.
- Built translation pipeline supporting 10+ languages with automated quality validation and metadata extraction for research dataset creation.

AR Treasure Hunt Game | *Unity3D, Vuforia AR Engine, C++* **May 2022**

- Built marker-based AR mobile game with image recognition, database integration, and 3D asset projection on physical surfaces using Vuforia AR Engine.
- Designed gamification mechanics with score tracking, hint system, and progressive difficulty levels for campus-wide treasure hunt events.

Hackathons & Competitions

- **Agentathon (Dec 2025)**: Built Neural Consensus Engine - Multi-agent AI system with Google Gemini 1.5, LangGraph orchestration, and GCP Cloud Run deployment with real-time visualization
- **Smart India Hackathon 2024**: Team VanGuard - Developed crowd management system with real-time monitoring, virtual queue tokens, and predictive analytics for pilgrimage sites
- **Accurate Background Hackathon (2024)**: Built automated document verification pipeline using OCR, NLP-based entity extraction, and fraud detection algorithms
- **Superr Selection Hackathon (2025)**: Developed data-driven solution under 48-hour constraint; Placed top 36 overall among 500+ participants

Education

University of Hyderabad (UoH) **2024 – 2026**
M.Tech - Information Technology — Courses: Deep Learning, ML, Advanced OS, Social Network Analysis *Hyderabad, India*

Modern Education Society College of Engineering **2019 – 2023**
B.E. Computer Engineering (Honors in AIML); CGPA: 8.85 — Courses: AI, ML, AR/VR, HCI *Pune, India*

Experience

The Sparks Foundation **April 2022 – May 2022**
Android Developer Intern *Remote*

- Developed Basic Banking App with SQLite database for transactions; designed intuitive XML-based UI layouts.

Suven Consultants and Technology Pvt Ltd **March 2022 – March 2022**
Machine Learning Intern *Remote*

- Built sentiment analysis model for IMDb reviews using supervised ML and lexicon-based approaches with comprehensive text preprocessing.