

HELI PATEL

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SUMMARY

Innovative Computer Science undergraduate with experience in machine learning, generative AI, and mobile app development. Proven ability to deliver production-ready solutions, including ML pipelines, version-controlled data management, and LLM fine-tuning. Skilled in transforming complex problems into deployable tech solutions using Python, Android, and modern AI frameworks. Passionate about contributing to AI-driven projects that drive real-world impact.

PROFESSIONAL EXPERIENCE

Param Group of Companies, Vadodara, India: Data Science & Machine Learning Intern Jan 2025 – May 2025

- Scraped e-commerce data using BeautifulSoup and implemented a machine learning pipeline for price prediction with MLflow tracking and DVC versioning.
- Engineered and vectorized structured personality profiles for fine-tuning open-source LLMs on relationship-focused datasets.
- Optimized prompt design, leading to a 20% improvement in LLM response relevance, and integrated embeddings for semantic search within a vector database.

TECHNICAL SKILLS

Programming Languages: Python, Java, C, SQL, XML, HTML, CSS

ML / AI: Machine Learning, Deep Learning, Natural Language Processing, Computer Vision

Tools: Android Studio, Firebase, OpenWeatherMap, MLflow, DVC

Libraries / Frameworks: TensorFlow, Pandas, NumPy, scikit-learn, Matplotlib, Seaborn, YOLO, Ultralytics

Database Management: MySQL, Firebase

Miscellaneous: Full Stack Development, Mobile Application Development, Web Development, UI/UX Design

PROJECTS

Wildlife Detection using Mobile Camera

Technologies Used: Python, OpenCV, YOLO, Mobile Integration

- Integrated YOLO model with mobile cameras for real-time wildlife detection, achieving 95% accuracy in identifying animals, vehicles, and humans.
- Captured GPS data at detection time for real-time location-based alerts in forest surveillance.

Crop Recommendation App

Technologies Used: Android Studio, ML, Firebase, OpenWeatherMap

- Built an ML-driven Android app offering crop suggestions based on real-time weather, soil type, and disease prediction using image analysis and APIs.

Sentiment Analysis

Technologies Used: Python, NLTK, scikit-learn, pandas

- Developed a text classifier to label sentiment using NLP preprocessing and ML algorithms, achieving high accuracy on test datasets.

Music Player

Technologies Used: Android Studio (Java)

- Implemented a feature-rich offline music player app with theme customization and smooth UI navigation.

EDUCATION

Bachelor of Technology in Computer Science & Engineering

Graduating May 2025

Navrachana University, Vadodara, India | SGPA: 7.68

7.68 SGPA

Relevant coursework: DSA, OS, DBMS, CN, AI/ML, CV, SE, CD, Cyber Security, Cloud Computing, Data Science

EXTRA CURRICULAR

Hackathon Participant | Neofolks Design Team (Logos/Posters/UI)