Hitesh Kumar Patel

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EDUCATION

VIT Bhopal University Bhopal, Madhya Pradesh
Bachelor of Technology in Computer Science and Engineering, CGPA: 9.18/10.0 *Aug 2023 – Aug 2027*

- Relevant Coursework: Data Structures & Algorithms, Machine Learning, Database Management, Computer Networks, Software Engineering

O.P. Jindal School Savitrinagar, Tamnar, Chhatt
12th Standard CBSE, Percentage: 95% (Mathematics, Physics, Chemistry, Computer Science) *July 2020 – Ju*

EXPERIENCE

AI/ML Intern May 2024 – July 2024
O.P. Jindal Group *Tamnar, Chhattisgarh*

- Developed and deployed AI-powered CCTV surveillance systems using computer vision algorithms for industrial security monitoring, improving automated threat detection accuracy by 40% across multiple facilities
- Managed comprehensive end-to-end deployment including physical installation of 50+ IP cameras, network configuration of Hikvision NVRs, and integration of PoE switches for seamless data transmission
- Configured centralized monitoring dashboard with real-time alert systems and automated incident detection capabilities, reducing security response time by 60%
- Collaborated with cross-functional security teams to optimize system performance, implement custom alert protocols, and reduce false positive alerts by 30%

PROJECTS

Deepfake Detection System | *Python, TensorFlow, Keras, OpenCV, Scikit-learn* Jan 2025 – Feb 2025

- Built robust deepfake detection system using advanced 2D Convolutional Neural Networks and transfer learning techniques, achieving 92% accuracy on comprehensive dataset of 50,000+ real and synthetic facial images
- Implemented sophisticated image preprocessing pipeline with data augmentation strategies and feature extraction methods to detect subtle deepfake artifacts and inconsistencies
- Optimized model architecture using hyperparameter tuning and regularization techniques, reducing inference time by 25% while maintaining high detection precision for real-time applications

Drug Review Sentiment Analysis Platform | *Python, LightGBM, Streamlit, Pandas, Matplotlib* Oct 20

- Developed comprehensive web application for pharmaceutical sentiment analysis using advanced NLP techniques on 161,218 patient drug reviews from Kaggle dataset, achieving 90% classification accuracy
- Implemented feature engineering and text preprocessing pipeline including tokenization, lemmatization, and TF-IDF vectorization for optimal model performance
- Created interactive data visualizations and statistical dashboards using Matplotlib and Seaborn to analyze drug effectiveness patterns, side effects correlation, and patient satisfaction trends
- Deployed production-ready Streamlit interface with real-time prediction capabilities, enabling healthcare professionals to efficiently analyze patient feedback and drug efficacy

TECHNICAL SKILLS

Programming Languages: Python, C++, SQL, JavaScript
Machine Learning & AI: TensorFlow, Keras, Scikit-learn, LightGBM, Computer Vision, Natural Language Processing, Deep Learning
Web Technologies: Streamlit, HTML, CSS, RESTful APIs
Tools & Platforms: Git, GitHub, Jupyter Notebook, Google Colab, VS Code, Linux
Database Management: MySQL, PostgreSQL, MongoDB
Data Analysis & Visualization: Pandas, NumPy, Matplotlib, Seaborn, OpenCV
Languages: Hindi (Native), English (Fluent)

CERTIFICATIONS & ACTIVITIES

Professional Certifications: Machine Learning Specialization (Stanford University & DeepLearning.AI - Coursera), Machine Learning A-Z with Python & R (Udemy), Deep Learning A-Z with Artificial Neural Networks (Udemy)

Competitive Programming & Continuous Learning: Active contributor on LeetCode with 100+ algorithmic problems solved across easy, medium, and hard difficulty levels

Professional Interests: Staying updated with latest AI/ML research trends, exploring computer vision applications, anime culture appreciation, and technical literature reading for continuous skill development