

# Hitesh Kumar Patel

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## EDUCATION

### VIT Bhopal University

Bachelor of Technology in Computer Science and Engineering, CGPA: 9.18/10.0

Bhopal, Madhya Pradesh

Aug 2023 – Aug 2027

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

### O.P. Jindal School

12th Standard CBSE, Percentage: 95% (Mathematics, Physics, Chemistry, Computer Science)

Savitrinagar, Tamnar, Chhattisgarh

July 2020 – July 2022

## EXPERIENCE

### AI/ML Intern

O.P. Jindal Group

May 2024 – July 2024

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 2023 – Nov 2023

- 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

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**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