

Harpreet Kour

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Education

VIT Bhopal University, Integrated M.Tech in AI Computer Engineering CGPA: 9.14	Bhopal-Indore Highway Kothrikalan, Sehore Madhya Pradesh – 466114 2022 - 2027
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Projects

SmartHelmet-Alcohol and Drowsiness Detection <ul style="list-style-type: none">Description: Smart Helmet Safety System that detects alcohol consumption and drowsiness in real time to enhance rider safety through sensor-based alerts.Role: Built an embedded system with alcohol and motion sensors, alert mechanisms, and real-time detection capability.Technologies Used: Arduino (Uno/Nano), MQ-series Alcohol Sensor, MPU6050 IMU, C++ (Arduino IDE), Serial Communication, Basic Electronics, Fritzing.	(August 2024 - July 2025)
Predicting-E.-coli-Presence-and-Resistance-in-Environmental-Samples-Using-Machine-Learning-Models <ul style="list-style-type: none">Description: Built ML models to predict E. coli presence and antibiotic resistance in environmental samples.Role: Data preprocessing, feature engineering, model training/evaluation, and performance analysis.Technologies Used: Python, Jupyter Notebook, scikit-learn, pandas, numpy, matplotlib, seaborn.	(April 2025)
QRStatus <ul style="list-style-type: none">Description: Developed a QR-enabled real-time faculty availability system that lets students check live status via unique QR codes, minimizing unproductive visits and improving campus efficiency.Role: Full-stack developer designing and implementing FacultyQRStatus, including dashboard, WebSocket updates, QR code features, responsive UI, and backend APIs for seamless real-time, cross-device functionality.Technologies Used: Frontend: React, Vite, Tailwind CSS, JavaScript QR Scanner; Backend: Node.js, Express.js, WebSocket (ws package); QR Code Generation: qrcode npm package; Database: JSON storage (extendable to MongoDB); Deployment: Replit and Node.js hosting platforms.	(August 2025)

Certification

Deloitte Australia - Technology Job Simulation <ul style="list-style-type: none">Description: Completed a technology job simulation project focused on solving real-world business challenges through innovative tech solutions.Technologies Used: Data Structures, Formal Communication, Planning, Programming, Python, Software Development Processes	(August 2025)
Artificial Intelligence for Beginners <ul style="list-style-type: none">Description: Completed an introductory project on Artificial Intelligence concepts, focusing on foundational AI techniques and applicationsTechnologies Used: Python, Jupyter Notebook, NumPy, pandas, scikit-learn, and basic machine learning algorithms.	(January 2025)

Additional

Technical Skills: Python, Java, C++, SQL, HTML/CSS, TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy, Jupyter, Team Management, Decision Making, Git, GitHub, AWS, Django.	
Academic Achievements: <ul style="list-style-type: none">Participated in HackRx 4.0 Hackathon by Bajaj Finserv, developing an Android app for forgery document detection using machine learning.Completed NPTEL Cloud Computing course with Elite + Silver rank, demonstrating proficiency in cloud technologies.Attended one-week AI innovation program focused on building real-world AI applications.	
Volunteer Experience: <ul style="list-style-type: none">AI Club – VIT Bhopal University: Volunteered to promote AI awareness by organizing workshops, seminars, and collaborative events.Mood Indigo – IIT Bombay: Supported event outreach, promotion, and coordination for India’s largest cultural festival.	

