Om Patel

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🪪 PROFILE

Hi, I'm Om Patel-a postgraduate student pursuing an MSc in Cybersecurity and Machine Learning at the University of Aberdeen. I bring a unique blend of expertise in full-stack web development, AI/ML analytics, and hands-on cybersecurity practices. My academic background, combined with real-world experience. leading web development projects and interning as a .NET + Angular developer, enables me to build secure, intelligent systems from the ground up.

What sets me apart is my ability to connect the dots between machine learning algorithms and cyber defense mechanisms. Whether it's using AI for security analytics, developing custom OCR systems, or performing penetration testing with tools like Metasploit and Wireshark, I'm passionate about turning complex challenges into innovative, data-driven solutions.

I can add value to your team by contributing to secure system design, automating analytics pipelines, building scalable web apps, and supporting ethical hacking or forensics efforts. I thrive in collaborative environments and am always eager to learn, adapt, and deliver high-quality results.

💼 PROFESSIONAL EXPERIENCE

09/2025 – Present
Surat, India

Arkalogi Tech
AI Developer
Responsible for the creation of proprietary AI tools that provide predictive market intelligence for trading operations. I focus on building adaptive systems that synthesize technical and fundamental data to emit reliable trading signals. These solutions are designed to enhance decision-making capabilities, allowing the firm to anticipate market trends and execute trades based on data-driven probability assessments.

07/2024 – 08/2025
Surat, India

Kairo
Freelance Web Developer & Project Lead
Led the development of a custom e-commerce platform for a new startup brand, building a robust front-end and back-end structure. After laying the technical foundation, recruited and onboarded two developers to continue feature development. Currently overseeing the project as a technical supervisor to ensure scalability, performance, and timely delivery.

01/2024 – 05/2024
Surat, India

Elite Technocrats
Full Stack Developer Intern
Played a full-stack development role in a Human Resource Management system, contributing across database design, backend development using 3-tier .NET architecture, and frontend implementation with Angular. Took initiative in leading the development team and overseeing module delivery in an agile environment.

12/2023 – 05/2024
Surat, India

Private Tutoring for Deputy Commissioner of Police (Surat)
Personal Tutor - Cybersecurity
Designed and delivered a self-curated cybersecurity course covering foundational concepts, theoretical frameworks, and hands-on practical skills. Guided the learner through real-world applications relevant to law enforcement cybersecurity challenges. Created a tailored curriculum to meet the unique needs of a senior law enforcement professional.

10/2023 – 12/2023	**HR Zone**
Surat, India	Course Instructor
	Designed and delivered a self-curated "Advanced Web Development" course, covering modern front-end and back-end technologies. Taught students through hands-on sessions, guiding them in building real-world web applications. Served as a contracted instructor, contributing to curriculum development and skill-building for aspiring developers.

🎓 EDUCATION

09/2024 – 09/2025	**MSc in Cybersecurity and Machine Learning**
Aberdeen, UK	University of Aberdeen
	Developing advanced skills in ethical hacking, digital forensics, AI-driven security analytics, and machine learning. The program combines technical cybersecurity training with applied artificial intelligence, preparing me to secure modern digital systems and design intelligent threat detection models.

2021 – 2024	**BSc in Information and Technology**
Surat, India	Sarvajanik University
	Graduated with First Class with Distinction	CGPA: 9.1/10
	Gained a strong foundation in programming, database systems, web development, and emerging technologies. The curriculum emphasized practical application through projects in software development, security, and data management.

🧠 SKILLS

Cybersecurity & Digital Forensics
Network security, threat analysis, ethical hacking (Kali Linux, Metasploit), incident response, digital forensics (Autopsy, Wireshark)

Web Development
Full-stack development (HTML, CSS, JavaScript, Angular, ASP .NET Core/MVC), REST APIs, responsive UI/UX, database integration

Project & Team Management
Project planning, task delegation, team supervision, freelance project ownership, agile collaboration

Programming Languages
Python, Java, JavaScript, C#, PHP, Prolog, Shell Scripting

Tools & Platforms
Git, GitHub, VS Code, Visual Studio, Postman, Firebase, MySQL, PostgreSQL, Microsoft Team Foundation Server (TFS)

Communication & Teaching
Technical writing, one-on-one instruction, public speaking, clear concept delivery

Machine Learning & AI
Model building (XGBoost, LightGBM, KNN), data preprocessing, feature engineering, computer vision (CNN), recommender systems, Natural Language Generation

📁 PROJECTS

Hybrid AI Phishing Message Detection Model
Developed a Soft-Voting Hybrid AI model combining BERT + LSTM deep learning models and LightGBM to detect phishing attempts from textual messages (emails, SMS, etc.). The system uses NLP-based feature extraction and fuses confidence scores from deep learning and traditional ML models for robust phishing detection.
- Technologies: Python, TensorFlow/Keras, LightGBM, NLP (BERT embeddings)
- Key Contributions: Model design, hybrid voting mechanism, real-world phishing dataset training, evaluation and deployment-ready pipeline.

AI-Driven Security Threat Detection

Developed machine learning models to identify and classify security threats using a real-world cybersecurity dataset. Conducted in-depth feature analysis, model evaluation, and visualization to derive intelligent insights for proactive threat mitigation.
- Technologies: Python, Scikit-learn, XGBoost, LightGBM, KNN, Matplotlib, Pandas
- Key Contributions: Feature engineering, model comparison, threat pattern analysis, report generation.

Predicting Situation Awareness Scores in Conditionally Automated Driving

Developed ML models to predict driver situation awareness during takeover transitions using eye-tracking and self-reported data. Applied XGBoost and LightGBM to evaluate critical features affecting driver response. Focused on safe human-AI interaction in autonomous driving systems.
- Technologies: Python, Scikit-learn, XGBoost, LightGBM, Pandas
- Key Contributions: Feature engineering, model tuning, visual analysis

Prolog-Based Text Adventure Game: Mafia Loan Escape

Developed a rule-based interactive game using SWI-Prolog which represents my understanding about Knowledge Representation & Reasoning for AI. The storyline involved escaping a loan debt from the mafia, with mechanics involving risk management, strategic decisions, and knowledge-based reasoning.
- Technologies: SWI-Prolog

Key Features: Knowledge base, inventory system, win/loss logic, age & country-based decisions

Human Resource Management System

Developed a comprehensive HR management system with four core modules to enhance workforce management and productivity:
- Recruitment: Streamlined candidate tracking, application management, and interview scheduling.
- Onboarding: Automated new employee induction processes, document handling, and training assignments.
- E-Training: Delivered online training modules and tracked employee progress and certifications.
- Project Management System: Enabled task assignment, progress tracking, and collaboration within teams.

Designed to improve HR efficiency and employee engagement with an intuitive interface and robust backend.
- Technologies: ASP.NET Core MVC, C#, SQL Server, JavaScript
- Key Contributions: System design, module development, database management, user interface implementation

🗄 CERTIFICATES

Cybersecurity - Level 1 to 3: Intellect Computer Classes, Surat

Completed foundational to advanced levels of cybersecurity training, including network security, ethical hacking, and system protection. Practical exposure to security tools and threat mitigation strategies.

📚 RESEARCH

Research on Security Threats and Detection of Deepfakes

Conducted an in-depth study on the security risks posed by deepfake technology. Explored the technical creation of deepfakes, including morphing techniques and the role of Generative Adversarial Networks (GANs). Performed hands-on experiments using tools such as DeepFace and DeepFace Live to generate deepfakes, and used Deepware to detect them effectively. Analyzed current detection methods and identified potential mitigation strategies to counteract emerging societal threats from deepfake misuse.

Key Focus Areas: Deepfake creation process, GAN architecture, morphing techniques, detection algorithms

Tools Used: DeepFace, DeepFace Live, Deepware, GAN frameworks

Outcomes: Practical understanding of deepfake generation/detection and recommendations for future security measures

✦ EXTRA CURRICULAR

NSS Volunteer

Actively contributed as a National Service Scheme (NSS) volunteer during my bachelor's degree, participating in community service, social awareness programs and being a part of contributing to society via camps like blood donation.

Mountaineering Enthusiast

Passionate about mountaineering for over 9 years, with experience in diverse expeditions ranging from Mt Friendship to climbing challenging peaks like Ben Nevis. Developed skills in endurance, teamwork, and navigation through multiple high-altitude treks and expeditions.