Om Patel

Aberdeen, Scotland, United Kingdom

github.com/007-OmPatel

09/11/2003

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.

EDUCATION

September 2024 -

MSc in Cybersecurity and Machine Learning

September 2025 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 Surat, India

BSc in Information and Technology

Sarvajanik University

Graduated with First Class with Distinction | CGPA: 9.41/10

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.

PROFESSIONAL EXPERIENCE

July 2024 - present Surat

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.

January 2024 -May 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.

December 2023 -May 2024 Surat, India

Personal Tutor - Cybersecurity

Private Tutoring for Deputy Commissioner of Police (Surat)

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.

October 2023 -December 2023 Surat, India

HR Zone

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 skillbuilding for aspiring developers.



SKILLS

Cybersecurity & Digital **Forensics**

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

Programming Languages

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

Communication & Teaching

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

Web Development

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

Tools & Platforms

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

Machine Learning & AI

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

Project & Team Management

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



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.



PROJECTS

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

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.