Aditya Patadiya

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Summary

- **Software Engineer with Security Mindset** - Proficient in Python and experienced in building secure, scalable application. Specialized in developing tools that integrate cryptography, system-level operations, and data integrity.
- **AI/ML Expertise and Enthusiasm** - Highly passionate and curious AI enthusiast with a robust foundation and hands-on experience in Generative AI, Large Language Models (LLMs), Agentic AI, Deep Learning, and Machine Learning.
- **Contributor to Open-Source Ecosystem** – Actively involved in open-source contributions, including mitmproxy, OWASP-BLT and Capa, demonstrating strong collaboration, debugging, and problem-solving skills.
- **Initiative-Taker and Team Leader** – Founded a cybersecurity club to guide peers in secure coding practices and system design. Skilled at communication technical concepts and leading team-based software development projects.

Open-Source Contributions

Project Name: mitmproxy
Description: An interactive TLS-capable intercepting HTTP proxy for penetration testers and software developers. My Role: bug fixing, adding dedicated test cases
Technologies: Python, TLS, SSL, WebSocket, http2
POW: Contributor and Co-author with members. (PR 7483, PR 7453)
Project Name: OWASP-BLT
Description: OWASP BLT is a collection of security tools.
Technologies: Python, JavaScript, Django, DevSecOps

- Actively contributing to this project.

Skills

Programming Skills: Python, JavaScript, C, SQL, HTML/CSS, Bootstrap, Java
Frameworks and Libraries: Django, Flask, Streamlit, TensorFlow, PyTorch, NumPy, Pandas, Scikit-learn, Rest API, Fast API
AI/ML Technologies: LangChain, LangGraph, Hugging Face, OpenAI API, LLaMA, FAISS, GenAI
Deep Learning & ML: CNNs, RNNs, LSTMs, KMeans, Logistic Regression
Databases: MySQL, SQLite, MongoDB, PostgreSQL, Vector DB
Cloud and DevOps: AWS, Azure, Docker, Jenkins, Maven, Version Control (Git)
Tools: Postman, VS Code

Projects

Hybrid AES-GCM – Kyber Post Quantum Cryptography Algorithm, GitHub **Mar ‘25 – May ‘25**

- **Tools & Technologies:** Python, Kyber, SPHINCS+, AES-GCM
- This project enhances data communication security using asymmetric key cryptography and matrix operations, where plaintext is encrypted with a salted public key matrix.
- Decryption reverses these steps using the inverse key matrix, ensuring robust and complex encryption

PQC based Decentralized Secure Framework for Smart Parking System, GitHub **June’25 – Present**

- **Tools & Technologies:** Python, TinyML, Blockchain, Smart Contract, PQC Algo, MongoDB, Docker
- **Real-time and predictive parking assistance** ensures users quickly find available slots based on their destination and preferences. The system **Seamless booking and payment experience** reduces hassle with automated slot allocation and secure transactions.

Generative AI & Machine Learning Projects, GitHub **July ’25 – Present**

- **Tools & Technologies:** Python, LangChain, scikit-learn, pandas, NumPy, Matplotlib, TensorFlow/PyTorch, sqlite3, Azure
- **Comprehensive AI & ML Project Collection** – Showcases a variety of implementations ranging from LangChain-based tools and multi-agent systems to predictive analytics models, offering a broad view of modern AI applications.
- **Practical, Hands-On Experiments** – Contains Python scripts and Jupyter notebooks that explore algorithms, automation workflows, and real-world problem-solving using machine learning and generative AI techniques.

Futures Trading Bot, GitHub **July ’25 – July ‘25**

- **Tools & Technologies:** Python, binance API
- Automated Binance Futures Trading Bot: A Python-based command-line tool that allows users to place market and limit orders on Binance Futures Testnet using validated inputs and secure API authentication.
- **Secure & Modular Design**: Utilizes python-binance, environment variables for credential safety, and structured logging to ensure transparent, extensible, and safe trading operations.

AI based Intrusion Detection Software, GitHub **Dec ’24 – April ‘25**

- **Tools & Technologies:** Python, MySQL, UI, Agent, AI/ML (for Anomaly Detection)
- Integrated machine learning models, boosting anomaly detection accuracy by 40%.
- Minimized false positive by 98%, automating alerts and response for improved security compliance.
- Automated file change analysis, increasing efficiency by 50% and reducing manual efforts 80%.

Academic Details

Bachelor of Technology – Marwadi University (GPA: CGPA: 7.74) **Rajkot, India | Sep ‘22 – Present**

Extra – Curricular Activity

Administrator | Cybersecurity Club | Marwadi University **Jan ’25 - Present**

- Conduct 20+ sessions on Web Pentesting and mentored 60+ juniors.

Member | Robotics Club | Marwadi University **Feb ‘23 – April ‘24**

- Gained hands-on experience with IOT devices such as Arduino, ESP32, NodeMCU, sensors like Ultrasonic sensor.