Aditya Sasidhar

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LinkedIn — GitHub

PROFESSIONAL SUMMARY

Results-driven Computer Science student specializing in Artificial Intelligence and Machine Learning with hands-on experience in developing autonomous AI agents, full-stack applications, and cybersecurity solutions. Proven track record in hackathons and competitive programming with expertise in Python, machine learning frameworks, and generative AI technologies.

EDUCATION

Vellore Institute of Technology 2023 – Present
Bachelor of Technology in Computer Science
Specialization: Artificial Intelligence and Machine Learning
GPA: 8.07/10

PROFESSIONAL EXPERIENCE

AI Intern July 2025 – Present
Soven Developer, Remote

- Architected and developed end-to-end autonomous AI agents using Large Language Models to automate complex workflows and business processes
- Engineered full-stack Generative AI applications with scalable REST APIs using Python Flask framework and integrated with dynamic front-end interfaces
- Implemented advanced Retrieval-Augmented Generation (RAG) pipelines to ground models with proprietary data, improving response accuracy by 40%
- Deployed machine learning models in production environment serving 1000+ daily API requests

Cybersecurity Intern February 2025 – March 2025
The Red Users, Remote

- Implemented network security measures and web application security protocols to identify and mitigate vulnerabilities
- Analyzed network traffic using Wireshark to detect potential security threats and performed SAP vulnerability assessments
- Conducted penetration testing and security audits, documenting findings and remediation strategies
- Gained expertise in threat detection, incident response, and cybersecurity best practices

PROJECTS

SafeSurf Junior – MP Police Cyber Safety Awareness Hackathon (3rd Place) 2024 – 2025

- Developed AI-powered browser extension using machine learning algorithms to filter harmful content for children, achieving 90% threat detection rate
- Created automated alert portal integrated with law enforcement systems to report potential legal violations
- Implemented real-time content analysis using natural language processing and computer vision techniques

TrojaNix – IIT Madras Malware Analysis Hackathon (Finalist) 2023 – 2024

- Trained machine learning and deep learning models for malware classification achieving 98% detection accuracy
- Analyzed datasets containing 100,000+ malware samples, implementing feature engineering techniques for improved precision
- Applied ensemble methods including Random Forest, XGBoost, and neural networks for malware detection

GenAI Dynamic Game Environment Generator May 2025

- Built interactive game using Python and Pygame allowing users to modify game maps through natural language prompts
- Integrated Large Language Models via Groq API (Meta Llama) for real-time terrain transformation and procedural generation
- Implemented chatbot interface for user-AI interaction and dynamic content generation

Gemini-based Cybersecurity Agent

- Developed autonomous cybersecurity agent using Google Gemini LLM to execute Linux commands and perform penetration testing through natural language input
- Integrated Generative AI for multi-turn reasoning with system-aware memory and robust error handling capabilities
- Utilized Python subprocess and platform libraries for secure terminal interfacing with Git-based version control

Fashion MNIST Classification with Convolutional Neural Networks

- Implemented and compared CNN architectures for image classification achieving 94% accuracy on Fashion MNIST dataset
- Developed improved CNN models using SeparableConv2D layers for enhanced computational efficiency
- Created comprehensive visualizations including confusion matrices, classification reports, and performance metrics

International Robotics Competition Team Leader 2016 – 2018

- Led 5-member cross-functional team in designing and building competitive robotics models, placing top 10 out of 150+ teams
- Managed project timelines, resource allocation, and technical documentation for international robotics competitions
- Coordinated hardware integration, programming, and testing phases ensuring on-time project delivery

TECHNICAL SKILLS

Programming Languages: Python, C++, C, Java, JavaScript, HTML, CSS, MATLAB, SQL

Machine Learning & Data Science: Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, TensorFlow, Keras, PyTorch, XGBoost, LightGBM, Random Forest, Support Vector Machines, Logistic Regression, K-Means Clustering, Principal Component Analysis, Cross-Validation, Hyperparameter Tuning, Feature Engineering

Deep Learning & AI: Convolutional Neural Networks, Recurrent Neural Networks, LSTM, GRU, Transformers, BERT, GPT, Hugging Face, Transfer Learning, Fine-tuning, Attention Mechanisms, Generative Adversarial Networks, Stable Diffusion, Large Language Models, Prompt Engineering

Development & Tools: Flask, REST APIs, Git, Docker, Linux, Jupyter, Google Colab PyCharm

Cybersecurity: Wireshark, Penetration Testing, Network Security, Vulnerability Assessment, Incident Response, Security Auditing, Threat Detection

Cloud & APIs: Google Cloud Platform, AWS, Groq API, Gemini API, OpenAI API, Hugging Face API

ACHIEVEMENTS

- 2nd Place Winner in Codeverse Hackathon
- 3rd Place Winner – MP Police Cyber Safety Awareness Hackathon 2024-2025
- Finalist – IIT Madras Malware Analysis Hackathon 2023-2024
- Top 10 Placement – International Robotics Competition (150+ teams)
- Current GPA: 8.07/10 in Computer Science with AI/ML specialization