NIKHIL KRISHNA A

Cybersecurity Analyst | Python Developer | AI & IoT Systems Engineer

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PROFILE

Cybersecurity and Software Development professional with hands-on experience in SOC automation, penetration testing, intrusion detection, and AI-driven multi-agent systems. IEEE-published researcher and holder of CRTOM and CNSP certifications. Built and deployed 5+ projects spanning real-time IoT intrusion detection, autonomous SOC agents, and LLM-powered multi-agent pipelines and RAG architectures. Skilled in threat detection, vulnerability assessment, AI agent development, and secure system design — actively targeting roles in cybersecurity operations, SOC engineering, and Agentic AI systems development.

TECHNICAL SKILLS

Cybersecurity & Operations

SOC Automation | SIEM | Threat Detection | Penetration Testing | Vulnerability Assessment | Network Security | ICS/SCADA Security | Red Teaming | OSINT | Threat Intelligence | Nmap

AI & Intelligent Agents

Multi-Agent Systems | LLMs | AI Agents | Agentic AI | RAG Pipelines | NLP | Prompt Engineering

Programming & Scripting

Python | JavaScript | PHP | MySQL | Embedded C | Bash/Shell

Web Technologies & IoT

HTML5 | CSS3 | Tailwind CSS | Bootstrap | Arduino | ESP32 | Raspberry Pi

Tools & Platforms

Linux | Suricata | Scapy | Node-RED | Streamlit | Docker

PROJECTS

Prompt Engineer Agent

Agentic AI Project | Python, NVIDIA NIM, Express.js, Vite

- AI-powered web app that crafts, tests, and refines production-ready prompts via conversational multi-agent workflow using NVIDIA NIM API (Llama 3.3 Nemotron 49B).
- Built A/B model comparison, prompt quality scoring, and version history with conversation branching.

AI SOC Analyst Agent

Google AI Agents Capstone | Python, Gemini API, LLMs

- Autonomous SOC agent using multi-agent framework, Gemini 2.0 Flash, and Groq LPU fallback for real-time threat detection and incident triage.
- Integrated VirusTotal, Cloudflare, and Discord APIs for threat enrichment; deployed Streamlit SOC dashboard for live monitoring.

Zero-Hack IDS – IoT Intrusion Detection System

Main Project | Python, Suricata, ESP32, Raspberry Pi

- Hybrid network and physical-layer IDS combining Suricata, Node-RED, and ESP32 sensors for multi-vector real-time intrusion detection.

Astra-SOAR – Autonomous Intrusion Response

Cybersecurity Project | Python, Scapy, Gemini AI, Streamlit

- Built a real-time Network Intrusion Detection and autonomous response platform using Scapy for live packet capture, a three-vector rule engine for anomaly classification, and Gemini AI integration for intelligent threat enrichment and contextual alert generation.

Night-Time Headlight Automation

IEEE Research Project | Embedded C, IoT Sensors

Published at IEEE ICDDS'25, IIIT Dharwad

- Designed and implemented an adaptive vehicle headlight control system using IR and LDR sensors for real-time ambient light detection and dynamic high/low beam switching, eliminating glare for oncoming drivers and enhancing night-time road safety.

EDUCATION

B.Tech – Computer Science & Engineering
Indira Gandhi Institute of Technology (KTU)

2022 – 2026

Final Year | Specialization: Cybersecurity & AI Systems

Class XII – VHSE (Junior Software Developer)
VHSS Higher Secondary School Paruthipally

2021 – 2022

75%

Class X
Janardhanapuram Higher Secondary School

2019 – 2020

92%

INTERNSHIPS

Cybersecurity Intern
Acmegrade

30 Days

- Completed practical training in network security, vulnerability scanning, and ethical hacking fundamentals.

Flutter Development Intern
Luminar Technolab

15 Days

- Gained exposure to cross-platform mobile app development using Flutter and Dart.

LANGUAGES

Malayalam	●●●●●
English	●●●●○
Tamil	●●●○○
Hindi	●●●○○
Telugu	●●○○○
Kannada	●●○○○

Legal Invoice Auditor
Google Capstone | Python, Gemini API, NLP, OCR

- Multi-agent system automating legal invoice validation using NLP and OCR pipelines to detect billing anomalies and duplicate charges.

Wi-Fi Penetration Testing Tool
Embedded Security | ESP32, Python

- ESP32-based wireless security assessment tool for SSID scanning, deauthentication testing, and network vulnerability identification.

RESEARCH & SEMINARS

IEEE Publication — ICDDS'25

Night-Time Headlight Automation System; presented at International Conference on Data-Driven Systems, IIIT Dharwad, 2025.

IoTShield: Defending IoT Systems Against Network Attacks

Delivered technical seminar on real-time IoT security using programmable network-based defence architectures.

CERTIFICATIONS

Red Team Operations Management (CRTOM)
Red Team Leaders

Jan 2026

- Certified in adversary emulation, red team planning, and offensive security operations management.

Certified Network Security Practitioner (CNSP)
The SecOps Group

Dec 2025

- Passed with Merit — network security, penetration testing, threat analysis, incident response.

Junior Software Developer (NSQF Level 4)
NASSCOM & Skill India

Sep 2022

- Government-recognized certification aligned with National Occupational Standards (IT-ITeS).

Fundamentals of Digital Marketing
Google Digital Unlocked

Jul 2022

- IAB Europe certified; SEO, social media strategy, and web analytics.