

CHANAKA LASANTHA NANAYAKKARA

PhD · MSc · BIT · MBCS

Security Architect (GRC & AI Research) · Postdoctoral Researcher in Artificial Intelligence · Visiting Lecturer, UK & Sri Lanka

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PROFESSIONAL PROFILE

Senior cybersecurity leader with 25 years of progressive experience, currently serving as a Security Architect. Combines hands-on security architecture, SOC operations, and threat detection and response with C-suite advisory, GRC strategy, and a doctoral and postdoctoral research record in AI-driven cybersecurity evidenced by thirteen peer-reviewed journal and conference publications and a contributed book chapter. Has reduced security incidents, accelerated response times, and achieved full regulatory compliance for enterprise and Fortune-500 clients across AWS, Azure, and GCP. An uncommon blend of practical cybersecurity leadership, multi-framework compliance expertise, and advanced academic research. Open to Senior Security Architect, Cybersecurity Architect, and Senior Security Manager appointments Colombo-based or fully remote (UTC+5:30, with daily working overlap across the UK, Europe, the Gulf, and US Eastern time).

CORE COMPETENCIES

- **Security Architecture & Zero Trust:** Identity-centric, assume-breach architectures across greenfield and legacy estates.
- **Governance, Risk & Compliance:** ISO 27001:2022, GDPR, PCI DSS, NIST and FedRAMP gap analysis to audit readiness.
- **SOC, SIEM & Threat Intelligence:** Detection engineering, threat hunting and incident response at scale.
- **Multi-Cloud Security:** Posture, workload and data protection across AWS, Microsoft Azure and Google Cloud.
- **AI / ML-Driven Defense & Data Science:** Machine learning for detection, automated response and security analytics.
- **Malware Analysis & Anomaly Detection:** Reverse engineering, behavioral analysis and advanced anomaly detection.

PROFESSIONAL EXPERIENCE

Kerner Norland Ltd

Sri Lanka

Security Architect (GRC and AI Research)

April 2023 – Present | Reports to: Global General Manager

Strategic Leadership & Business Impact

- **Revenue Protection:** Secured client assets through advanced threat prevention.
- **Cost Optimization:** Achieved cost savings through security automation and process optimization.
- **Risk Reduction:** Decreased security incidents by 93% using proprietary ML / AI detection systems.
- **Compliance Excellence:** Achieved 100% compliance across ISO 27001, GDPR, PCI DSS, FedRAMP, and NIST frameworks.

Technical Innovations

- Architected hybrid ML models combining Random Forest, SVM, and Linear Regression for IP-reputation validation.
- Developed real-time threat detection using Python, C#, and Assembly, integrating with AWS WAF and GuardDuty.
- Implemented Zero Trust Architecture across multi-cloud environments (AWS, Azure, GCP).
- Created automated incident response, reducing MTTR from 4 hours to 45 minutes.

Leadership & Culture

- Built and led a security team across 5 geographic locations.
- Established a security-first culture impacting employees from onboarding to continuous training.
- Authored security policies, procedures, and standards for the enterprise GRC framework.
- Conducted executive briefings to C-suite and board members.

BlackSwan Technologies Ltd

Israel

Security Architect (GRC)

February 2021 – April 2023 | Reports to: CISO

Major Achievements

- Led security architecture for a digital-transformation initiative.
- Designed an automated penetration-testing engine, reducing testing time by 60%.
- Implemented the MITRE ATT&CK framework across SOC operations.
- Developed business-continuity plans ensuring 99.99% uptime for critical services.

Key Projects

- **Project FORTRESS:** Enterprise-wide Zero Trust implementation.
- **Project SHIELD:** ML-driven threat-hunting platform processing 1 TB+ of logs daily.
- **Project PHOENIX:** Disaster-recovery automation reducing RTO from 24 hours to 2 hours.

Virtusa Ltd

Sri Lanka

Lead Consultant - Infrastructure Technologies and Security

May 2020 – February 2021 | Reports to: Senior Manager / Technical Director

Vodafone ISP Transformation Project

- Led a 15-member cross-functional team for complete security transformation.
- Implemented a DevSecOps pipeline using Jenkins, Git, Docker, and Kubernetes.
- Integrated WSO2 Identity Management for 10,000+ users with SSO / MFA.
- Deployed secure CI/CD, reducing deployment vulnerabilities by 80%.

Technical Implementations

- AWS Services: S3, VPC, EFS, EC2, Lambda, API Gateway, CloudWatch, IAM, ECR, ECS, EKS.
- Security tools: SAST / DAST integration, automated code review, and container security scanning.
- Strengthened application security, reducing post-production issues by 65%.

Commercial Credit and Finance PLC

Sri Lanka

ICT Consultant Level 3 (IT Manager Level)

September 2013 – May 2020 | Reports to: Senior Manager / Head of IT

Enterprise Leadership

- Managed the annual IT security budget and infrastructure projects.
- Led the Oracle Grid Infrastructure implementation for critical financial systems.
- Designed disaster recovery for 50+ applications with RPO of 15 minutes and RTO of 2 hours.

Major Projects Delivered

- **ERP Security Hardening:** Secured SAP / Oracle ERP serving 5,000+ users.
- **ATM Network Security:** Python-based automated security monitoring for 200+ ATMs.
- **POS System Protection:** Secured 500+ POS terminals across 100 branches.
- **HRIS Implementation:** Led security architecture for a complete HR digital transformation.
- **Release Management System:** Designed a DevOps pipeline using Jenkins and Python.

Technical Achievements

- Implemented an ESB Message Broker for secure inter-system communication.
- Deployed centralized log management (SIEM) processing 500 GB+ of daily logs.
- Designed HA clustering for large-scale ERP systems with 99.95% uptime.
- Created unified auditing and backup solutions for regulatory compliance.

Globe Internet Limited

Malawi, Africa

Senior System Engineer - Cloud, Cybersecurity, Wireless & Linux, Satellite, Fiber Networks, SCADA

September 2007 – January 2010 | Major ISP serving 8,000+ customers

Infrastructure & Security Leadership

- Architected a nationwide ISP infrastructure serving an 8,000+ customer base.
- Implemented 4G LTE, WiMAX, and SCDMA networks across 3 cities.
- Designed a centralized wireless-management and security-monitoring system.

Security & Cloud Solutions

- Deployed IDS / IPS / ASA security appliances with high availability.
- Implemented an OpenStack hybrid cloud infrastructure.

- Built ultra-high-availability storage solutions using GlusterFS.
- Configured SOC / SIEM for centralized security monitoring.
- Managed Oracle Grid Infrastructure for database clustering.

Training & Leadership

- Conducted training for the Malawi ESCOM Electricity Board on fiber-optic systems.
- Led VSAT data-communication implementation for remote locations.

Enterprise Technology (Pvt) Ltd

Sri Lanka

Network System Engineer

March 2005 – September 2007 | Infrastructure and Security Focus

Core Responsibilities

- **Linux Administration:** RHEL and CentOS platform administration.
- **Network Security:** Configured Cisco routers, switches, firewalls, and VPNs.
- **Fiber Optics:** OTDR testing, installation, and configuration.
- **Microsoft Infrastructure:** Exchange Server, Active Directory, and Domain Controller.
- **Automation:** Developed Shell / Bash scripts for automated tasks and SSH tunnels.
- **Monitoring:** Implemented Nagios, Zenoss, and NetFlow for network monitoring.
- **Virtualization:** VMware ESXi deployment and management.

Key Projects

- **SLPA Mega Port Project:** Key member implementing the largest fiber-optic security project.
- **Dialog PLC Call Centre:** Project Coordinator for infrastructure implementation.
- **F-Secure Gateway:** Implemented enterprise anti-virus / anti-spam for Dialog Telekom.

Queens Radio Marine Electronics (Pvt) Ltd

Sri Lanka

Marine Electronics and Telecommunication Technician

January 2001 – February 2005 | High-Speed Crafts & Deep Seagoing Vessels

Specialized Marine Systems Expertise

- Marine navigation systems.
- Satellite communication systems.
- Auto-pilot, safety systems, and defense systems.

ACADEMIC APPOINTMENTS

University of Wolverhampton

UK

Senior Visiting Lecturer

May 2026 – Present | MSc Programmes (Level 7)

- **Module Delivered:** Incident Management and Response.

SLTC Research University

Sri Lanka

Senior Visiting Lecturer

May 2025 – Present | BSc (Honours) Programmes

- **Cyber Warfare and Information Warfare:** Nation-state threats, APT groups, and cyber deterrence.
- **Blockchain and Applications:** Smart contracts, DeFi security, and consensus mechanisms.

University of Gloucestershire

UK

Senior Visiting Lecturer (Cybersecurity, Advanced Malware Analysis and AI)

September 2023 – Present | MSc and BSc (Honours) Programmes

- Secure Software Systems Architecture.
- Reverse Engineering and Memory Forensics.
- ML-driven Malware Analysis.
- IoT Security and Intrusion Detection Systems.
- Cloud Computing Security (AWS, Azure, GCP).

- Security risks in cloud computing environments.
- Network security protocols and policies.
- Authentication mechanisms and security modelling.

EDUCATION

Postdoctoral Fellowship in Artificial Intelligence

Feb 2026 – Feb 2027

School of Computer Science & AI, SR University

Research on AI & ML-driven cybersecurity, adaptive threat detection, cloud security intelligence, and translating research into applied, production-grade security systems.

Doctor of Philosophy (PhD), Information Security & Forensics

Aug 2022 – Sep 2025

IIC University of Technology, Cambodia

Research: “Machine Learning Approaches for Adaptive IP Reputation Validation and Defense in Cloud Security.”

Master of Science (MSc), Network & Information Security

Jun 2017 – Nov 2018

Kingston University, United Kingdom

Thesis: “Security Enhancement in Database Grid Infrastructure for Storage Clusters.”

Bachelor of Information Technology (BIT)

2010 – 2013

University of Colombo School of Computing, Sri Lanka

Project: Web-Based Inventory, HR, and Payroll System.

Advanced Diploma in Electronics & Telecommunication Engineering

2000 – 2005

City & Guilds of London Institute, United Kingdom

RESEARCH INTERESTS

- AI and machine-learning driven cybersecurity and adaptive threat defense.
- Cloud security, multi-cloud architecture and intelligent cloud firewall systems.
- IP reputation intelligence, anomaly detection and moving target defense.
- Malware analysis, reverse engineering and intrusion detection systems.
- IoT and edge network security, federated learning and secure software architecture.

RESEARCH PORTFOLIO & PUBLICATIONS

13 peer-reviewed journal & IEEE conference papers and a contributed book chapter. Several papers are co-authored.

[View on Google Scholar](#)

Peer-Reviewed Journals

1. **Dynamic Threat Prevention in Cloud Firewalls Using Hybrid Machine Learning for IP Reputation Intelligence.** *Journal of Communications*, vol. 21(3), 2026. Hybrid RF / SVM / LR / KNN / XGBoost ensemble; 98.04% accuracy.
2. **Hybrid ML-Driven Cyberattack Prevention for Suspicious IP Reputation Validation in Geographically Isolated VPN-Tunnelled IoT Networks.** *Taylor & Francis*, 2026. Federated learning for privacy-preserving IoT security; 98% accuracy.
3. **An Unsupervised Machine Learning Approach for Dynamic Anomaly Detection and Risk Defense in Cloud Servers.** *International Journal of Research in Computing (IJRC)*, 2026. Isolation Forest, LOF and DBSCAN; 92% detection accuracy.
4. **Defending Cloud Web Applications using ML-Driven Triple Validation of IP Reputation by Integrating a Security Operation Center.** *Global Journal of Computer Science & Technology*, 2024. Wazuh SOC and MITRE ATT&CK integration; double-blind peer-reviewed.
5. **A Novel Framework for Real-Time IP Reputation Validation Using Artificial Intelligence.** *MECS Press Journal*, 2024. OpenAI generative models and NLP for AWS WAF threat intelligence and real-time log analysis.

6. **Comprehensive Understanding of Psychological Traits in Entrepreneurial Achievements Through Insights from the Strategic Way.** *International Research Journal*, 2024. Comparative analysis of entrepreneurial leadership traits.
7. **Enhancing Security in Database Grid Infrastructure for Storage Clusters.** *WSEAS Transactions on Computers*, 2023. Oracle Grid Infrastructure security with GlusterFS and OpenVPN.

IEEE Conference Proceedings

8. **Hybrid Supervised Machine Learning Driven Novel IP Reputation Validating Techniques for Cloud Firewalls.** *IEEE*, 2025. Ensemble RF / LR / SVM model for AWS cloud firewall; 85% reduction in false positives.
9. **Hybrid Machine Learning Approach for Enhanced Vulnerability Detection in Cloud Environments Using NIST and MITRE Frameworks.** *IEEE*, 2025. NIST and MITRE ATT&CK integration; 60% faster threat detection.
10. **Hybrid Machine Learning and Moving Target Defense (MTD) for Comprehensive Switchport Attack Detection.** *IEEE*, 2025. Dynamic IP randomization with ML; evaluated on UNSW-NB15, KDD'Cup99 and NSL-KDD; 90%+ accuracy in ARP-poisoning prevention.
11. **Validating IP Reputation in Cloud Firewall Systems Using ML-Driven Signature Generation and Detection Techniques.** *IEEE*, 2024. AI and NLP-driven dynamic signature generation for AWS WAF.
12. **Bridging the Gap: Leveraging Emerging Technologies for Sustainable Development in the Global South.** *Global Conference for Multidisciplinary Research (GCMR), Achievers International Campus*, 2025.

Book Chapter

13. **Multidisciplinary Approaches in Artificial Intelligence.** *Cambridge Scholars Publishing*, 2024. Contributing author on AI applications in cybersecurity.

ACADEMIC SERVICE & RECOGNITION

IEEE Reviewer & Technical Programme Committee

- **IATMSI-2026:** Reviewer - IEEE MP Section & ABV-IIITM Gwalior.
- **16th ICCCNT 2025:** Conference Reviewer - IIT Indore (July 2025).
- **4th ICDCECE-2025:** Reviewer / Technical Programme Committee - BITM Ballari (April 2025).
- **5th ICARC 2025:** Conference Reviewer - Sabaragamuwa University (February 2025).
- **6th icSoftComp 2024:** Technical Programme Committee Member - Springer Nature (December 2024).
- **9th ICATC 2024:** Author, Presenter & Reviewer - University of Kelaniya (December 2024).

Awards & Honours

- **Certificate of Excellence in Reviewing (x2):** Asian Journal of Research in Computer Science, 2025.
- **SLTC Research University:** Appreciation Certificate, External Reviewer, IRC 2024 (February 2025).
- **IEEE SSITCON-2024:** Certificate of Appreciation, Peer Reviewer (October 2024).

CERTIFICATIONS & PROFESSIONAL MEMBERSHIPS

Professional Membership

Membership	Organization	ID / Grade	Validity
MBCS	British Computer Society - The Chartered Institute for IT (Cyber Security)	995007328 · Professional Member	2018 – 2027

Technical Certifications & Training

Certification	Issuing Body	Year	Status
Red Hat Certified Engineer (RHCE)	Red Hat		Trained
Advanced Diploma, Electronics & Telecom.	City & Guilds of London Institute	2005	Certified
Engineering Diploma	City & Guilds of London Institute	2003	Certified
Network Engineering & Data Centre Design	Enterprise Technology	2005	Certified
Digital Satellite & Data Communications	Industry	2005	Certified
Hardware Engineering Diploma	Industry	2003	Certified
Intelligent Robotics	IIT Campus	2006	Certified
National Competence in Electronics	NAITA	2001	Licensed

TECHNICAL SKILLS

Programming & Automation

Language	Proficiency	Applications
Python	Expert	ML / AI, automation, security tooling
C#	Advanced	Enterprise applications, security
Assembly	Advanced	Low-level security, reverse engineering
Shell / Bash	Expert	Automation, DevOps, system administration

Cybersecurity & Cloud: Security architecture, SOC, SIEM / EDR, Zero Trust, and multi-cloud security across AWS, Azure and GCP.

Frameworks & Compliance: ISO 27001, NIST, PCI DSS, GDPR, FedRAMP and MITRE ATT&CK.

LANGUAGES

English Full professional proficiency. **Sinhala** Native.

REFERENCES

Academic Reference Prof. Ruvan Abeysekera Faculty of Graduate Studies, BCAS Campus, Colombo, Sri Lanka ruvan@bcas.lk	Industry Reference Mr. Kithsiri Gunasekera Director, VSIS Information (Pvt) Ltd, 7 Suleiman Terrace, Colombo 05 kithsiri@vsis.lk
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DECLARATION

I hereby declare that all information provided in this curriculum vitae is true and accurate to the best of my knowledge.

Chanaka Lasantha Nanayakkara