

**Dr. Nanayakkara Wawage**  
**Chanaka Lasantha**  
**POSTDOCTORAL RESEARCHER**  
**in Artificial Intelligence & Cybersecurity**  
*Research. Innovate. Impact.*

- Artificial Intelligence**  
Machine Learning  
Deep Learning
- Cybersecurity**  
Security Architecture  
Threat Intelligence
- Research Excellence**  
High Impact Publications  
Scopus Indexed
- Bridging Academia & Industry**  
Collaborate. Innovate.  
Create Impact.

**SRU**  
SR UNIVERSITY

Post-Doctoral Fellow  
School of Computer Science  
& Artificial Intelligence  
SR University

Committed to advancing knowledge  
and developing intelligent, secure,  
and sustainable solutions.

Building a safer, smarter  
and more intelligent world  
through research and innovation.

## DR. CHANAKA LASANTHA NANAYAKKARA

Security Architect | Cybersecurity GRC Strategist | Cybersecurity Researcher

PhD · MSc · BIT · MBCS · Postdoctoral Researcher · Senior Lecturer

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### PROFESSIONAL PROFILE

Senior cybersecurity leader with 25 years of progressive experience, currently serving as Chief Security Architect. Combines hands-on security architecture, SOC operations, and threat detection and response with C-suite advisory, GRC strategy, and a doctoral research record in AI-driven cybersecurity. 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).

### PROFESSIONAL EXPERIENCE

#### Kerner Norland Ltd

Sri Lanka

#### Chief 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

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#### 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

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#### 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

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#### Enterprise Leadership (6 Years 8 Months)

- 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, Security, Wireless & Linux)

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

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#### 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

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#### 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

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#### 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 Programs

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

### SLTC Research University

Sri Lanka

#### Senior Visiting Lecturer

May 2025 – Present | BSc (Honors) Programs

- **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 (Honors) Programs

#### Advanced Modules

- 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).

### London Metropolitan University

UK

#### Visiting Lecturer (Cybersecurity & Cloud Security)

February 2019 – January 2020 | BSc (Honors) Programs

#### Module Learning Outcomes Achieved

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

## EDUCATION

### Doctor of Philosophy (PhD)

Information Security and Forensics – IIC *University of Technology*

August 2022 – September 2025

**Research:** “Evolutionary Cybersecurity Solutions Utilizing ML and AI for Adaptive Defense Against Contemporary Cyber Threats.”

### Master of Science (MSc) With Distinction

Network & Information Security – Kingston *University, UK*

June 2017 – November 2018

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

### Bachelor of Information Technology (BIT)

Information Technology – University of *Colombo School of Computing*

2010 – 2013

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

### Advanced Diploma in Electronics & Telecommunication Engineering

Electronics & Telecommunication Engineering – City & *Guilds of London Institute*

2000 – 2005

### 2025 PUBLICATIONS

#### 1. Hybrid Supervised Machine Learning Driven Novel IP Reputation Validating Techniques for Cloud Firewalls

*IEEE Conference Proceedings* · June 9, 2025

- Ensemble ML model (RF + LR + SVM) for IP-reputation assessment.
- Integration with AWS WAF, GuardDuty, and SOC logs.
- **Impact:** 85% reduction in false positives.

#### 2. Hybrid Machine Learning Approach for Enhanced Vulnerability Detection in Cloud Environments

*IEEE Conference Proceedings* · April 16, 2025

- Novel integration of NIST and MITRE ATT&CK frameworks.
- Real-time vulnerability detection with ensemble models.
- **Impact:** 60% faster threat detection.

#### 3. Hybrid Machine Learning and Moving Target Defense for Comprehensive Switchport Attack Detection

*IEEE Conference Proceedings* · January 20, 2025

- Dynamic IP randomization with ML-based attack detection.
- Evaluated on UNSW-NB15, KDD' Cup99, and NSL-KDD datasets.
- **Impact:** 90%+ accuracy in ARP-poisoning prevention.

### 2024 PUBLICATIONS

#### 4. Validating IP Reputation in Cloud Firewall Systems Using ML-Driven Signature Generation

*IEEE Conference Proceedings* · December 24, 2024

- Dynamic signature generation using ML / NLP.
- AWS WAF integration for automated blocking.
- **Impact:** Real-time protection against DDoS and spam.

#### 5. Multidisciplinary Approaches in Artificial Intelligence (Book Chapter)

*Cambridge Scholars Publishing* · October 1, 2024

- Contributing author on AI applications in cybersecurity.

#### 6. Comprehensive Understanding of Psychological Traits in Entrepreneurial Achievements

*International Research Journal* · July 16, 2024

- Comparative analysis: Elon Musk versus Elizabeth Holmes.
- Leadership traits and their impact on business success.

#### 7. Defending Cloud Web Applications using ML-Driven Triple Validation of IP Reputation

*Global Journal of Computer Science and Technology* · June 8, 2024

- Integration with Wazuh SOC and MITRE ATT&CK.
- Triple-validation methodology.
- **Impact:** Published in a double-blind peer-reviewed journal.

#### 8. A Novel Framework for Real-Time IP Reputation Validation Using AI

*MECS Press Journal* · February 1, 2024

- OpenAI GPT integration for threat intelligence.
- AWS S3 real-time log analysis.
- Natural language processing for security insights.

#### 9. Enhancing Security in Database Grid Infrastructure for Storage Clusters

*WSEAS Transactions on Computers* · November 22, 2023

- Oracle Grid Infrastructure security enhancement.
- GlusterFS integration with OpenVPN.
- Cost-effective, scalable storage security.

## PROFESSIONAL RECOGNITION & AWARDS

### 2025 IEEE CONFERENCE APPOINTMENTS

- **16th ICCCNT 2025:** IEEE Conference Reviewer IIT Indore, July 2025.
- **4th ICDCCE-2025:** Technical Program Committee IEEE SB Ballari, April 2025.
- **5th ICARC 2025:** Conference Reviewer Sabaragamuwa University, February 2025.

### 2025 EXCELLENCE AWARDS

- **Certificate of Excellence in Reviewing:** Two awards Asian Journal of Research in Computer Science, January 2025.
- **SLTC Research University:** Appreciation Certificate for External Reviewing, February 2025.

### 2024 RECOGNITION

- **Springer Nature:** Technical Program Committee Member 6th icSoftComp 2024, December 2024.
- **University of Kelaniya:** 9th ICATC 2024 Paper Presenter & Reviewer, December 2024.
- **IEEE SSITCON-2024:** Certificate of Appreciation, October 2024.

## CERTIFICATIONS & PROFESSIONAL MEMBERSHIPS

### Active Professional Memberships

Membership	Organization	ID / Status	Validity
MBCS	British Computer Society	995007328	2018 – 2027
Professional Member	Cybersecurity Division	Active	Current

### Technical Certifications

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

### Unique Distinction

- **Wing Chun Martial Art:** 6th Level Practitioner International Wushu Federation, 1998.

## PROGRAMMING & DEVELOPMENT

Language	Proficiency	Applications
Python	Expert	ML / AI, Automation, Security Tools
C#	Advanced	Enterprise Applications, Security
Assembly	Advanced	Low-level Security, Reverse Engineering
Shell / Bash	Expert	Automation, DevOps, System Administration
SQL	Advanced	Database Security, Analysis

## CAREER OBJECTIVES

### As Chief Security Architect

*"To architect next-generation security solutions that seamlessly integrate cutting-edge ML / AI technologies with proven security frameworks, creating resilient, scalable, and cost-effective defense systems."*

### As Senior Lecturer

*"To bridge the academia–industry gap by developing practical, research-driven curricula that prepare the next generation of security leaders for real-world challenges, while contributing to the global body of cybersecurity knowledge."*

## PROFESSIONAL REFERENCES

### Academic Reference

#### Prof. Ruvan Abeysekera

Faculty of Graduate Studies  
BCAS Campus, Colombo, Sri Lanka  
[ruvan@bcas.lk](mailto:ruvan@bcas.lk)

### Industry Reference Sri Lanka

#### Mr. Kithsiri Gunasekera

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7, Suleiman Terrace, Colombo 05  
[kithsiri@vsis.lk](mailto:kithsiri@vsis.lk)

## DECLARATION

I hereby declare that all information provided in this curriculum vitae is true and accurate to the best of my knowledge. I understand that any false information may result in the rejection of my application or termination of employment.