BADRUDEEN YUSUF AKINKUNMI

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RESEARCH INTEREST

- **Automotive Cybersecurity:** Securing autonomous vehicles, connected cars, and vehicular communication systems (V2X).
- **Artificial Intelligence and Machine Learning for Cybersecurity:** Developing intelligent, adaptive defense mechanisms for IoT ecosystems, smart city infrastructures, and large-scale connected devices.
- **Internet Security, Privacy, and Digital Forensics**: Addressing challenges of data protection, digital identity, forensic investigation, and resilience in the modern digital age.

EDUCATION

- **Bachelor of Science**

  Cyber Security – Air Force Institute of Technology, Kaduna, Nigeria   (2018 - 2022)

  Thesis: A Machine Learning Approach to Crypto-Ransomware Detection on Windows Devices

  Advisor: Dr. Fika-Adamu Fatima

  GPA: Final CGPA 4.84/5.00 | Major GPA 5.00/5.00 | Top 1% First Class Honors

PUBLICATIONS & MANUSCRIPTS IN PREPARATION

Akinkunmi, B.Y., Fika-Adamu, F. (2023). A Machine Learning Approach to Crypto-Ransomware Detection on Windows Devices. Target: IEEE Transactions on Information Forensics and Security (TIFS).

Akinkunmi, B.Y. (2024). AI-Powered Cyber Defense for Autonomous Vehicles: Framework for Real-Time Threat Mitigation. Target: ACM Transactions on Cyber-Physical Systems.

RESEARCH EXPERIENCE

AI-Powered Cyber Defense for Autonomous Vehicles   (2023 – Present)
Independent Research

- Conducting a systematic literature review on current AI and ML techniques used for detecting and mitigating cyber threats in autonomous vehicles.

- Investigating security challenges associated with sensor fusion, V2X (Vehicle-to-Everything) communication, and autonomous decision-making algorithms.

- Exploring adversarial machine learning vulnerabilities and proposing model-hardening strategies for resilient AV systems.

Air Force Institute of Technology, Kaduna, *(2021 – 2022)*

Undergraduate Researcher
Project: *A Machine Learning Approach to Crypto-Ransomware Detection on Windows Devices*
Advisor: Dr. Fika-Adamu Fatima

- Collected and preprocessed Windows-based ransomware datasets for ML modeling.

- Implemented supervised learning models to detect ransomware behaviors with high accuracy.

- Evaluated model performance using precision, recall, and F1-score to determine real-time applicability.

- Awarded one of the best five undergraduate Research projects in the Cybersecurity Department.

Galaxy Backbone Limited, Nigeria *(2021 – 2022)*
Cybersecurity and Application Security Intern

- Conducted quarterly vulnerability and risk assessments on critical government (.gov.ng) domains using the NIST framework.
- Documented and analyzed attack surfaces and reported exploitable vectors to technical and compliance teams.
- Participated in PCI-DSS compliance audits and contributed to evidence gathering for license renewal processes.
- Co-developed internal documentation on security standards and deployment best practices for government-hosted cloud services

RELEVANT WORK EXPERIENCE

- **HUAWEI TECHNOLOGIES   NIGERIA** (2024 – Present)

Front Desk Cloud and Network Security Engineer

- o Monitor, detect, and respond to security threats and incidents across cloud and on-premise networks using SIEM and threat intelligence tools.
- o Configure, manage, and audit network security devices such as firewalls, IDS/IPS, VPNs, and proxies to safeguard data and infrastructure.
- o Implement and enforce Identity and Access Management (IAM) policies to control and monitor access within cloud environments
- o Train staff on cybersecurity and cloud security best practices.

- **GALAXY BACKBONE LIMITED, ABUJA, NIGERIA** (2023 – 2024)

Network Security Analyst

- o Performed vulnerability assessments, applied patches, and hardened systems to reduce the attack surface of cloud and networked environments.
- o Conducted security audits and assessments to ensure compliance with standards like ISO 27001, NIST, PCI-DSS, and GDPR.
- o Designed and maintained secure network architectures, including segmentation and secure connectivity between hybrid environments.
- o Automated security operations using Infrastructure-as-Code (IaC) tools such as Terraform, Ansible, or CloudFormation.

- **GALAXY BACKBONE LIMITED ABUJA,** (2021 – 2022)

Cybersecurity and Application Security (intern)

- o Conducted quarterly vulnerability assessments on Nigerian government (.gov.ng) websites using the NIST framework, and performed periodic network tests to strengthen infrastructure security.
- o Participated in PCI-DSS audits, contributing to successful task execution and renewal of critical security management licenses.
- o Co-developed onboarding documentation for cybersecurity standards ahead of website deployment on Galaxy Backbone's cloud platform.
- o Led content creation in a team of five for Cybersecurity Awareness Month 2021 and contributed to various tasks as a Level 1 Analyst.

TEACHING EXPERIENCE

Student Tutor – Air Force Institute of Technology, Kaduna (2019 – 2022)

- Tutored junior students in AI, algorithms, software engineering, cryptography, and networking.

- Improved students' academic performance through structured sessions.

SUPERVISION & MENTORING

Guided junior peers on research proposals and final year projects in cybersecurity and applied ML.

- Abdulkhaliq AbdulAzeez, Undergraduate Student, Air Force Institute of Technology, Kaduna, Nigeria 2022 – Present
- Zainab Isha, Bayero University, Kano, Nigeria 2022 - Present
- Zainab Mayana, Undergraduate Student, Air Force Institute of Technology, Kaduna, Nigeria 2022 – 2024
- Fatimah Sulaimon, Undergraduate Student, Air Force Institute of Technology, Kaduna, Nigeria 2022 – 2024

LEADERSHIP ROLES

- *NYSC Intern Welfare Representative, Galaxy Backbone Limited*   *(2022 – 2023)*

Served as the primary link between interns and management, addressing concerns and facilitating resolutions related to welfare, stipend disbursement, and clearance documentation. Coordinated monthly training sessions to enhance intern development and engagement.

- *Social Director – Platoon 4, NYSC Nasarawa State Orientation Camp*   *(2023)*

Organized and coordinated social activities throughout the 21-day orientation program, including event planning, team preparation, and execution. Led the platoon to win first place in the Mr. Macho contest and secured runner-up in the Miss NYSC competition.

- *Hostel Block Leader, AFIT – Block A Boys Hostel*   *(2021 – 2022)*

Oversaw day-to-day affairs and welfare of hostel occupants, liaised with the Student Affairs Coordinator to address emerging issues, and championed initiatives that led Block A to win the award for neatest male hostel.

VOLUNTEERING & COMMUNITY OUTREACH

- *BWS (Breast Without Sport) CDS Group – NYSC*   *2023–2024*

Participated in community and marketplace outreach initiatives focused on educating women and young girls about breast cancer awareness, with an emphasis on early detection through the campaign #EarlyDetectionSavesLives.

- *Diary of Hackers – Volunteer*   *2022 – 2024*

Participated in annual National Cybersecurity Awareness Month (#NCSAM) campaigns held every October. Supported outreach efforts in secondary schools across Kaduna and Abuja, Nigeria, educating students on cybersecurity best practices and empowering them to navigate the digital world safely.

- *CYBER SAFE FOUNDATION*   *2021 – PRESENT*

I worked with the Cyber Safe Foundation as a volunteer for the recovery of social media accounts. We help victims recover their hacked or suspended social media accounts and enlighten them on how to stay safe online.

PROFESSIONAL MEMBERSHIP & AFFILIATION

Member, Cyber Security Experts Association of Nigeria

Oracle Cloud Infrastructure 2025 Certified Foundations Associate

CERTIFICATIONS & TRAINING

Jobberman Soft Skills Training	2025
Oracle Certified Foundation Associate	2025
AWS Cloud infrastructure Foundation	2025
CISCO Cybersecurity Essential	2023

NITDA/CISCO Introduction to Cyber Security	2022
NITDA/CISCO CCSK v4.1 Foundation Training	2022

AWARDS & HONORS

Top 1% Graduate, Cybersecurity Department, AFIT	2023
Best Undergraduate Research Project, Cybersecurity Department	2023
Outstanding Staff Award, Huawei Galaxy MS Project – Security/IT/Cloud	2024

TECHNICAL SKILLS

Cybersecurity: Network security, threat analysis, penetration testing

Programming: Python, Java, C++

AI/ML: Anomaly detection, model development, data analysis

Tools: FTK Imager, Wireshark, TensorFlow, Autopsy, MATLAB

Cloud & DevOps: Terraform, Ansible, SIEM, EDR, Nessus, Acunetix, Firewalls

Design & UI: Adobe Suite (Photoshop, XD, InDesign), Figma

PROFESSIONAL SERVICE

- Contributor to internal technical documentation and onboarding manuals
- Cybersecurity awareness content development

LANGUAGES

- English: Fluent
- Yoruba: Native

REFERENCES

- **Dr. Fatimah Fika-Adamu:** Department of Cyber Security, Air Force Institute of Technology, Kaduna, Nigeria | ✉ *faateemahfika@gmail.com* | *Thesis Supervisor & Advisor*
- **Dr. Ahmed Taiye Mohammed:** Department of Cultural Sciences, Faculty of Arts and Humanities, Linnaeus University, Växjö, Sweden **|** ✉ *ahmedtaiye.mohammed@lnu.se* **|** *Lecturer & Advisor*