

# SULEIMAN SABO MUHAMMAD

Newcastle Upon Tyne, United Kingdom

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## RESEARCH INTERESTS

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Cyber-Physical Systems (CPS) Security, Adversarial Machine Learning, real-time anomaly detection, and classification.

## EDUCATION

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### PhD Computer Science

2025 – Present

Newcastle University

Newcastle, United Kingdom

- Researching real-time anomaly detection and attribution in Industrial CPS using AI-driven approaches.

### MSc Cyber Security – Distinction

2023 – 2024

Newcastle University

Newcastle, United Kingdom

- Dissertation: Evaluated risk assessment strategies using the SWaT CPS testbed.
- Grade: 80%

### BSc Computer Science (Software Engineering) – 1st Class Honours

2020 – 2023

Newcastle University

Newcastle, United Kingdom

- Dissertation: Studied digital signatures for secure, accessible e-voting in Nigeria. Grade: 75%

### Foundation in Science, Computing, Engineering and Mathematics

2020

INTO Newcastle University

Newcastle, United Kingdom

- Completed with 84%. Met direct-entry requirements for undergraduate study.

## RESEARCH EXPERIENCE

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### Secure and Resilient Systems (SRS) Group

2025 – Present

PhD Researcher in Cyber-Physical Systems Security

Newcastle, United Kingdom

- Conducting doctoral research on applying artificial intelligence techniques to enhance the security of large-scale industrial CPS.
- Developing real-time anomaly detection and classification models tailored for CPS networks.
- Exploring adversarial machine learning techniques and profiling stealth attacks targeting system integrity.

## TECHNICAL SKILLS

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- **Languages:** Python, Java, C, Kotlin, JavaScript, HTML, CSS
- **Frameworks/Tools:** Django, React, Firebase, SonarQube
- **Additional:** Knowledge of machine learning concepts and data analysis
- **Operating Systems:** Linux, Windows

## KEY PROJECTS

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### Secure Chat Platform

2024

React, Firebase, AES, Steganography

- Developed an encrypted messaging platform using React and Firebase for real-time communication.
- Applied AES encryption and steganography to embed messages securely within image files.
- Led threat modeling and contributed to designing a robust security policy.
- Achieved 100% on technical report and 90.4% overall project grade.

### Predictive Analysis of Weather Trends

2023

Python, Raspberry Pi, LSTM, ARIMA

- Built a time-series prediction system to forecast weather using local sensor data.
- Compared forecasting models (LSTM, ARIMA) and optimized LSTM achieving  $R^2 = 0.9675$ .
- Automated collection and preprocessing of data using Raspberry Pi edge computing.

## Rubbish App – United Nations Sustainable Development Goals

2022

### *Mobile App, Community Mapping*

- Collaborated on a mobile app enabling users to report and map unclean areas to promote environmental hygiene.
- Aligned with UN SDGs to encourage community-driven waste monitoring and intervention.

## Lottery Web Application

2021

### *Django, HTML/CSS, SQLite*

- Implemented a lottery system with member-based and randomized number selection options.
- Designed admin interfaces to securely manage draw outcomes and user activity.

## Blogging Web Application

2021

### *Django, Bootstrap, SQLite*

- Created a blogging platform with full CRUD operations and role-based access for users and admins.
- Enabled admin-controlled publishing workflows and enforced secure login mechanisms.

## EXPERIENCE

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### Matchday Assistant

2021 – Present

#### *Newcastle United FC*

*Newcastle, United Kingdom*

- Managed crowd control and ensured safety during major football events.

### Assistant Manager

2019 – Present

#### *Kuyan Integrated Farm*

*Nigeria*

- Managed inventory, financial records, and digital systems to streamline farm operations and ensure accountability.

## CERTIFICATIONS

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- ISC2: Security Principles; Incident Response and BCP/DR (2024)
- LSBF: Global Policy Issues (2023)
- Government College (India): Python for Data Science (2023)

## AWARDS & FUNDING

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- **Sage & School Prize (2024):** Awarded for outstanding academic performance as the top MSc Cyber Security student in the School of Computing at Newcastle University.
- Funding to attend the CISPA Summer School 2024 on Usable Security in Saarbrücken, Germany.
- **Petroleum Technology Development Fund (PTDF) Scholarship (2023):** Received a fully funded scholarship covering tuition, visa fees, accommodation, living expenses, and travel for postgraduate study in the UK.
- **Top Academic Performance in Principles of Computing (2022):** Achieved the highest score in the module with a grade of 95%, demonstrating strong proficiency in foundational computing concepts.

## Hobbies

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- Football enthusiast with interests in running and FIFA gaming during leisure hours.