FIAGBEDU, INNOCENT

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EDUCATION

- **Master of Science in Cybersecurity and Digital Forensics, Kwame Nkrumah University of Science and Technology- (2022-2024)**
  Thesis Title: A Framework for Secure Microservice Architecture for Cloud-based Applications.
  Supervisor: Dr. Rose-Mary Owusuaa Mensah Gyening
- **Bachelor of Science in Mathematics and Statistics, University of Cape Coast- (2014-2018)**
  Second Class Upper Honors

RESEARCH INTERESTS

My research interest focuses on leveraging Machine Learning to enhance Information and Network Security. I look forward to integrating the machine learning predictive capabilities such as that of Hidden Markov Models with the quantification power of the Shannon entropy model. This combination aims to develop advanced algorithms for detecting and mitigating security threats in real-time.

By applying these models, I seek to address the evolving challenges in Information Security, ensuring robust and adaptive defenses against sophisticated attacks. My work aims to contribute to both theoretical improvements and practical applications to strengthen networks security posture.

RESEARCH EXPERIENCE

Cybersecurity Researcher at Safenet Cyber Technologies: 2024 – Date

Roles

Exploring and researching areas of cybersecurity concern relating to Information Security Systems.

Research Process

i. Data collection and analysis
ii. Literature reviews
iii. Review of existing framework
iv. Development of framework, implementation and evaluation.

I Gained experience in modelling using Hidden Markov Models (HMM) and Shannon Entropy Model to develop architecture for information security systems. The proposed framework for advanced information security analysis and implementation is under testing and evaluation.

TEACHING EXPERIENCE

Teaching Assistant at the Mathematics Department, University of Cape Coast (UCC): 2018-2019

Key Responsibilities

- Taught Operations Research and Linear Algebra course

- Helped in grading student courses

- Assisted course tutor set quiz questions for student grading

WORK EXPERIENCE

January 2024-Date

Information Security Expert and Cybersecurity Researcher at Safenet Cyber Technologies

Key Responsibilities

- Maintained data integrity of client web resources and channels
- Developed and implemented cybersecurity modules for web and application security
- Cleaned client computers off malware
- Helped in secure office networking
- Collected relevant research information to maintain secure cyberspace for clients and others
- Involved in penetration testing and secure software development

April 2022 – December 2023

Information Security Expert and Cybersecurity Researcher at Labelkin

Key Responsibilities

- Maintained data integrity of client web resources and channels
- Developed and implemented cybersecurity modules for web and application security
- Cleaned client computers off malware
- Helped in secure office networking
- Collected relevant research information to maintain secure cyberspace for clients and others
- Involved in penetration testing and secure software development

January 2020- March 2022

Creative Lead, Website Developer and UI/UX Developer at Labelkin Advertising

Key Responsibilities

- Developed client's website based on php, HTML and CSS
- Maintained client websites to keep them running in best state
- Mentored upcoming developers to work on web development projects
- Developed mobile app interfaces with Figma and Adobe Xd
- Designed software prototypes and UI
- Vetted creative design outputs and layouts for implementation

AWARDS & HONORS

Certificate of Service- Mathematics Department (UCC): 2019

KEY SKILLS

Microsoft Office Suite, Adobe Suite, Figma, HTML & CSS, Python Programming, Penetration Testing, Server Virtualization.

PROFESSIONAL MEMBERSHIPS

- Advertisers Association of Ghana: 2022-2023
- Cybersecurity Expert Association of Ghana: 2024 – Date

COMMUNICATION

My strong communication abilities have been important in building a collaborative and innovative work atmosphere within the organizations I have worked with.

LEADERSHIP

I have been able to inspire and manage the creative team to achieve excellent results and continuously surpass expectations by actively listening to team members' ideas and concerns, providing clear and constructive criticism, and explaining the vision and goals of each project.

PUBLICATIONS

A Framework for Secure Microservice Architecture for Cloud-based Applications. - Awaiting Publication

REFERENCES

- Dr. Ibrahim Mahmud
  Lecturer, Department of Mathematics-
  UCC mibrahim@ucc.edu.gh

- Dr. Rose-Mary Owusuaa Mensah
  Gyening Lecturer, KNUST
  rmo.mensah@knust.edu.gh

- Mr. Michael Okyere
  Managing Director, Labelkin
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