Daniel Commey

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RESEARCH INTERESTS

My research focuses on advancing the field of **Cybersecurity** by developing secure and efficient solutions for **Blockchain**, **Internet of Things (IoT)**, and **Cloud Computing** systems, leveraging tools such as **Machine Learning**, **Cryptography**, and **Game Theory**.

EDUCATION

Texas A&M University — College Station, TX, USA
Ph.D. in Interdisciplinary Engineering — *Aug. 2022 – Present*
- Advisor: Dr. Garth V. Crosby

Kwame Nkrumah University of Science and Technology — Kumasi, Ghana
M.Phil. in Computer Engineering — *Sept. 2017 – Nov. 2019*
- Advisor: Dr. Griffith S. Klogo

Kumasi Technical University — Kumasi, Ghana
B.Tech. in Accounting with Computing — *Sept. 2017 – Aug. 2019*

Kwame Nkrumah University of Science and Technology — Kumasi, Ghana
B.Sc. in Computer Engineering (Honours) — *Sept. 2011 – June 2015*

EXPERIENCE

Graduate Assistant — Fall 2022 – Present
Texas A&M University — *College Station, TX, USA*
- Conduct various cybersecurity research projects that focus on emerging threats and defense mechanisms.
- Support Cybersecurity and Digital Ethics courses by facilitating labs and providing academic assistance.

Assistant Lecturer — Sept. 2020 – Aug. 2022
Ho Technical University — *Ho, Ghana*
- Delivered lectures, developed course materials, and facilitated lab sessions for computer engineering courses
- Mentored students and contributed to curriculum development

Teaching Assistant — Sept. 2015 – Aug. 2016
University of Energy and Natural Resources — *Sunyani, Ghana*
- Coordinated with lecturers, developed educational materials, and conducted tutorials
- Provided academic support to students in computer science and engineering courses

IT Intern — June 2014 – Aug. 2014
University Information Technology Services (UITS), KNUST — *Kumasi, Ghana*
- Resolved hardware and software issues and coordinated system maintenance
- Developed and delivered user training on essential software applications

PUBLICATIONS

Securing Health Data on the Blockchain: A Differential Privacy and Federated Learning Framework
Daniel Commey, Sena Hounsinou, Garth V. Crosby
arXiv preprint arXiv:2405.11580, 2024

Securing Blockchain-based IoT Systems with Physical Unclonable Functions and Zero-Knowledge Proofs
Daniel Commey, Sena Hounsinou, Garth V. Crosby
arXiv preprint arXiv:2405.12322, 2024

Strategic Deployment of Honeypots in Blockchain-based IoT Systems
Daniel Commey, Sena Hounsinou, Garth V. Crosby
arXiv preprint arXiv:2405.12951, 2024

Egan: Evolutional GAN for Ransomware Evasion
Daniel Commey, Benjamin Appiah, Bill K. Frimpong, Isaac Osei, Ebenezer N.A. Hammond, Garth V. Crosby
2023 IEEE 48th Conference on Local Computer Networks (LCN), 2023

Performance Comparison of 3DES, AES, Blowfish and RSA for Dataset Classification and Encryption in Cloud Data Storage
Daniel Commey, Selorm Griffith, James Dzisi
International Journal of Computer Applications, Volume 177, Issue 40, Pages 17-22, 2020

Conferences & Workshops

6th IEEE International Conference on Artificial Intelligence Circuits and Systems	Abu Dhabi, UAE
Presenter	*April 2024*
IEEE 48th Conference on Local Computer Networks	Florida, USA
Presenter	*October 2023*
Python for Engineers Workshop	Ho Technical University, Ghana
Attendee	*January 2022*
Teaching and Assessment Training Workshop	Ho Technical University, Ghana
Attendee	*April 2021*
2019 Second African Workshop on Circuits and Systems	KNUST, Ghana
Attendee	*May 2019*
2017 First African Workshop on Circuits and Systems	KNUST, Ghana
Attendee	*November 2017*

Service

Judge	2024 Texas Science & Engineering Fair
Texas, USA	
Judge	2024 Regional High School Science Bowl
Texas, USA	
Judge	2023 Texas Science & Engineering Fair
Texas, USA	
Committee member	Validation of Occupational Standards for Computer Science
CTVET, Ghana	*June-July 2022*
Committee member	Faculty Academic Board
Ho Technical University, Ghana	*2021-2022*
Committee member	Curriculum Development/Review Committee for BTech. Computer Science
Ho Technical University, Ghana	*2021-2022*

Awards

IEEE CAS Student Travel Grant	IEEE Circuits and Systems Society
	2024
Travel Award - Multidisciplinary Engineering	Texas A&M University
	2024
Multidisciplinary Engineering Scholarship	Texas A&M University
	2023

Skills

Programming Languages: Python, Java, C/C++, Solidity, LaTeX
Tools & Technologies: Git, Docker, Ethereum, Hyperledger Fabric, TensorFlow, PyTorch
Soft Skills: Research, Technical Writing, Presentation, Collaboration
Certifications: CCNA [2016], ISC2 CC [2024]

Affiliations

Member	Association for Computing Machinery (ACM)
	2023 – Present
Member	Institute of Electrical and Electronics Engineers (IEEE)
	2020 – Present