KUMI SANDRA

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EDUCATION

UNIVERSITY OF SASKATACHEWAN, SASKATOON, CANADA
SEPTEMBER 2021 – PRESENT
PhD, Computer Science

DONGSEO UNIVERSITY, BUSAN, SOUTH KOREA
SEPTEMBER 2018 – AUGUST 2020
MSc, Computer Engineering. GPA: 4.19/4.5

KWAME NKRUMAH UNIVERSITY OF SCIENCE & TECHNOLOGY, KUMASI, GHANA
SEPTEMBER 2012 – JUNE 2016
BSc, Computer Science. GPA: 3.42/4.0

RESEARCH EXPERIENCE

Graduate Student Researcher, Multi-User Adaptive Distributed Mobile and Ubiquitous Computing Lab, University of Saskatchewan
- Blockchain based data sharing application
- Detection of Crop Diseases using Deep Learning
- Sentiment Analysis
- Synthetic Data Generation

MSc Researcher, Information and Communication Security Lab, Dongseo University
- Detection of Malicious software using Machine Learning techniques
- Automatic detection of web vulnerabilities through dynamic analysis

WORK EXPERIENCE

TEACHING ASSISTANT, UNIVERSITY OF SASKATCHEWAN, SASKATOON, CANADA
SEPTEMBER 2021 – PRESENT
COURSES: FULL STACK WEB DEVELOPMENT, MOBILE AND CLOUD COMPUTING, PYTHON, OBJECT-ORIENTED SYSTEMS
- Leading Tutorials and Labs
- Marking Assignments

COMPUTER VISION RESEARCH ENGINEER, DANVI CO. LTD, BUSAN, SOUTH KOREA
JANUARY 2021 – JULY 2021
- Smart Factory (Detection of defects in mobile tapes, stickers and labels)
- Facial emotion recognition and object tracking using Deep Learning

RESEARCHER, DONGSEO UNIVERSITY (COMPUTER VISION LAB), BUSAN, SOUTH KOREA.
OCTOBER 2020 – DECEMBER 2020
- Malware Detection Using Deep Learning Techniques
- Adversarial attacks against Malware Visualization Detection Methods

TEACHING & RESEARCH ASSISTANT, KWAME NKRUMAH UNIVERSITY OF SCIENCE & TECHNOLOGY, KUMASI, GHANA.
SEPTEMBER 2016 – AUGUST 2017
COURSES TAUGHT: COMPUTER GRAPHICS AND HUMAN-COMPUTER INTERACTION (HCI)
- Lead tutorials and prepare course materials.

- Construct test and grade assignments.
- Assist students in their project works

INTERN (IT ASSISTANT) BOPP LIMITED, TAKORADI, GHANA
JUNE 2015 – AUGUST 2015
- Network troubleshooting and logging IT-related complaints.
- Software installation and maintenance.

SKILLS
- Proficient in programming with Python, Rust, Java and R.
- Scikit-learn, OpenCV, TensorFlow, PyTorch, OpenVINO.
- Databases: MySQL, NoSQL (Mongodb, Couchdb)
- Website Development
- Language: English and Korean

PUBLICATIONS
- Sandra Kumi, Maxwell Hilton,Charles Snow,Richard K. Lomotey,Ralph Deters. "SleepSynth: Evaluating the use of Synthetic Data in Health Digital Twins." IEEE ICDH (2023).
- Lomotey, Richard K., Sandra Kumi, Maxwell Hilton, Rita Orji, and Ralph Deters. "Using Machine Learning to Establish the Concerns of Persons with HIV/AIDS During the COVID-19 Pandemic from their Tweets." IEEE Access (2023).
- Kumi, Sandra, Dylan Kelly, Jonathan Woodstuff, Richard K. Lomotey, Rita Orji, and Ralph Deters. "Cocoa Companion: Deep Learning-Based Smartphone Application for Cocoa Disease Detection." Procedia Computer Science 203 (2022): 87-94.
- Lomotey, Richard K., Sandra Kumi, and Ralph Deters. "Data Trusts as a Service: Providing a platform for multi-party data sharing." International Journal of Information Management Data Insights 2, no. 1 (2022): 100075.
- Kumi, Sandra, Richard K. Lomotey, and Ralph Deters. "A Blockchain-based platform for data management and sharing." Procedia Computer Science 203 (2022): 95-102.
- https://scholar.google.com/citations?user=yvWcxWcAAAAJ&hl=en

AWARDS
- Best female computer science student (2016), KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI, GHANA.

REFERENCES Available upon request.