



# Delanyo Kwame Bensah

## Kulevome

PH.D. STUDENT · UESTC

School of Information and Communication Engineering,  
University of Electronic Science and Technology of China, Chengdu, 611731, P. R. China.

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Scholar

## Education

### University of Electronic Science and Technology of China (UESTC)

PH.D. IN INFORMATION AND COMMUNICATION ENGINEERING  
GPA: 3.71/4.00

Chengdu, P. R. China

Sep. 2019 - present

### University of Electronic Science and Technology of China (UESTC)

MENG. IN ELECTRONIC SCIENCE AND TECHNOLOGY  
GPA: 3.99/4.00

Chengdu, P. R. China

Sep. 2017 - Jul. 2019

### Accra Institute of Technology (AIT)

BENG. IN ELECTRICAL/ELECTRONIC ENGINEERING  
GPA: 4.01/4.30 (SUMMA CUM LAUDE)

Accra, Ghana

Oct. 2014 - May. 2017

### Ho Polytechnic

HND. IN ELECTRICAL/ELECTRONIC ENGINEERING  
GPA: 4.14/5.00

Ho, Ghana

Jan. 2007 - Jul. 2009

## Work Experience

### Freelance

PRIVATE TUTOR

Ghana

Nov. 2016 - Jul. 2017

- Tutored junior high school (JHS) students in Physics, math, and other related subjects.
- Assisted students in completed assignments and projects.

### SUBSEA 7

ROV PILOT TECHNICIAN

Various locations worldwide  
(Norway, Mexico, Angola, etc.)

Oct. 2011 - Jun. 2016

- Worked on various projects in Africa, Europe, and the Americas as a Remotely Operated Vehicles (ROV) pilot technician for clients such as Total, Exxon Mobil, and Statoil.
- Assisted in piloting and co-piloting an ROV on SUBSEA 7 vessels during subsea construction projects in various locations worldwide.
- Tested and installed Sonar, Camera, Laser, etc and other job specific devices on the ROV.
- Carried out dive checks before and after each subsea operation.
- Attended toolbox talks and task risk assessment meetings and completed necessary safety documentations prior to undertaking maintenance or repair works on the ROV system.

### Ghana Broadcasting Corporation (GBC)

ASSISTANT TECHNICIAN ENGINEER

Ghana

Sep. 2009 - Oct. 2011

- Conducted research in the planning and installation laboratory and undertook reconfiguration of FM / TV transmitters and transposers.
- Developed alternative solutions to problems through research.
- Assisted in the installation, repair and maintenance of transmitters and transposers at various locations nationwide.
- Trained interns on the basic operations of a TV/Radio transmitter.

## M & G Pharmaceuticals Company

FACTORY HAND

Ghana

Feb. 2006 –Dec. 2006

- Blister machine operator.
- Assembled and disassembled relevant parts of the blister machine in preparation for a new product.
- Preprocessed and packaged pharmaceutical products.

## Ministry of Defense (1 Signal Regiment)

TECHNICIAN (NATIONAL SERVICE PERSON)

Ghana

Oct. 2004 –Jul. 2005

- Worked with other national service personnel to complete daily assigned projects.
- Assisted in troubleshooting and repairing of computers.
- Assisted in the installation of VHF/HF transceivers.

## Internships

### LEEFRANCO Electric Works

INTERN

Accra, Ghana

Aug. 2008 –Oct. 2008

- Assisted in the troubleshooting of 11kV high tension supply and installation of 500kVA 11/.433kV transformer.
- Assisted in the earthing of substation equipment.

### Ministry of Defense (1 Signal Regiment)

INTERN

Ghana

Sep. 2007 –Nov. 2007

- Set up and operated public address systems at state and military functions.
- Assisted in the installation of VHF/HF transceivers.
- Gained and applied practical skills in the repair of computers, communication and test equipment.

## Research Interests

- Prognostics and Health Management (PHM) of Engineering Systems
- Deep Learning
- Physics-Informed Neural Networks
- Condition Monitoring and Fault Diagnosis

## Research Experience

### ACADEMIC

- **Academic researcher at the yangtze delta research institute of UESTC**, (Aug. 2021 - present)
- **Fault diagnostics in a phased array system**, (Sep. 2020 - present)
- **Roller bearing fault diagnosis and classification**, (Sep. 2020 - present)
- **Classification of COVID-19 cases using deep learning models**, (Sep. 2020 - Nov. 2020)
- **Predicting the state of health of electrolytic capacitors**, (Sep. 2019 - Dec. 2020)
- **Predicting the remaining useful life (RUL) of lithium ion batteries**, (Aug. 2018)

Huzhou

Chengdu / Huzhou

Chengdu / Huzhou

UESTC, Chengdu

UESTC, Chengdu

UESTC, Chengdu

### NON-ACADEMIC

- **Measuring and analyzing the RF field strength of a newly installed digital TV transmitter**

Nationwide, Ghana

### PERSONAL

- **Smart home automation system using Arduino**
- **Image recognition system using Raspberry pi 4**
- **Autonomous vehicle design**, Coursera project
- **Fault detection and classification in industrial machines using machine learning**, MATLAB training project
- **Intelligent water billing system using Arduino**
- **End of course projects on Udemy, Coursera, Pluralsight, and Udacity**

## Research Publications

1. **Kulevome, D. B. K.**, Hong, Wang, & Xuegang, Wang. (2022). Rolling bearing fault diagnostics based on improved data augmentation and ConvNet. *Journal of Systems Engineering and Electronics*, (Accepted).
2. **Kulevome, D. B. K.**, Hong, Wang, & Xuegang, Wang. (2022). Deep neural network based classification of rolling element bearings and health degradation through comprehensive vibration signal analysis. *Journal of Systems Engineering and Electronics*, 33(1), 233-246.
3. **Kulevome, D. K. B.**, Hong, W., Wang, X., Cobbinah, B. M., Agbley, B. L. Y., & Safder, Q. (2021). System Diagnosis Framework for Sustaining the Operational Fidelity of a Radar System. In 2021 18th International Computer Conference on Wavelet Active Media Technology and Information Processing (ICCWAMTIP) (pp. 640-644). IEEE.
4. Agbley, B. L. Y., Li, J., Haq, A. U., Bankas, E. K., Ahmad, S., Agyemang, I. O., **Kulevome, D.**, ... & Latipova, S. (2021). Multimodal Melanoma Detection with Federated Learning. In 2021 18th International Computer Conference on Wavelet Active Media Technology and Information Processing (ICCWAMTIP) (pp. 238-244). IEEE.
5. **Kulevome, D. K.**, Wang, H., & Wang, X. (2021). A Bidirectional LSTM-Based Prognostication of Electrolytic Capacitor. *Progress In Electromagnetics Research C*, 109, 139-152.
6. Agbley, B. L. Y., Li, J., Haq, A., Cobbinah, B., **Kulevome, D.**, Agbefu, P. A., & Eleeza, B. (2020). Wavelet-based cough signal decomposition for multimodal classification. In 2020 17th International Computer Conference on Wavelet Active Media Technology and Information Processing (ICCWAMTIP) (pp. 5-9). IEEE.
7. Mawuli, E. S., Wu, Y., **Kulevome, D. K. B.**, Qingfeng, Z., Zhao, C., Liu, H., ... & Kai, K. (2020). Distributed Characterization of On-Chip Spiral Inductors for Millimeter-Wave Frequencies. In 2020 IEEE MTT-S International Conference on Numerical Electromagnetic and Multiphysics Modeling and Optimization (NEMO) (pp. 1-4). IEEE.

## Honors and Awards

### DOMESTIC (ACADEMIC)

2021	<b>1st Place</b> , Academic achievement award in the school of information and communication eng., UESTC	<i>Chengdu, China</i>
2020	<b>1st Place</b> , Academic achievement award in the school of information and communication eng., UESTC	<i>Chengdu, China</i>
2019	<b>Chinese University Scholarship (Full)</b> , Scholarship awarded for Ph.D. program in UESTC	<i>Chengdu, China</i>
2018	<b>2nd Place</b> , Academic achievement award in the school of information and communication eng., UESTC	<i>Chengdu, China</i>
2017	<b>Chinese University Scholarship (Partial)</b> , Scholarship awarded for postgraduate taught program in UESTC	<i>Chengdu, China</i>

### DOMESTIC (EXTRACURRICULAR)

2021	<b>3rd Place</b> , Excellent performance award in the school of information and communication eng., UESTC	<i>Chengdu, China</i>
2021	<b>2nd Place (Badminton)</b> , International students winter games, UESTC	<i>Chengdu, China</i>
2021	<b>2nd Place (Lawn tennis)</b> , International students winter games, UESTC	<i>Chengdu, China</i>
2020	<b>1st Place (Badminton)</b> , International students autumn games, UESTC	<i>Chengdu, China</i>
2018	<b>2nd Place</b> , Excellent performance award in the school of information and communication eng., UESTC	<i>Chengdu, China</i>

### INTERNATIONAL

2015	<b>Safety Award</b> , Award for enabling a safe working environment	<i>subsea7, UK</i>
2014	<b>Safety Award</b> , Award for enabling a safe working environment	<i>subsea7, UK</i>

## Professional Membership

### Institute of Electrical and Electronics Engineers (IEEE)

*Graduate student member*

- IEEE Signal Processing Society Membership
- IEEE Reliability Society Membership

### National Society of Black Engineers (NSBE)

*Student member*

### PHM society

*Student member*

## Skills

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**Computational skills**    **Programming:** MATLAB; Python

**Frameworks:** TensorFlow; Keras; PyTorch

**Typesetting**    MS Office Suite (Word, Excel, PowerPoint); LaTeX

**Languages**    English (Native); Chinese (Average)

Excellent analytical skills; Good interpersonal skills; Good written and oral communication skills

**Personality**    Hardworking; Self - motivated; Organized; Fast learner and eager to learn new things

## Hobbies and interests

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Reading;    Technology;    Sports;    Listening to music;    Traveling