EMMANUEL BOAKYE

MSc, BSc

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BIOGRAPHY

Emmanuel Boakye is a Senior ICT Assistant with University Information Technology Services (UITS) at Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, where he works in the Network Operations and Infrastructure Division (NOID). He is responsible for the day-to-day running of network and ICT systems across the Commercial Area, Administration Block II and the J. Harper Building (Directorate of Student Affairs), together with the Maintenance, Estate, Security, Transport and Procurement units. Since joining KNUST in 2017, he has helped design, cost and supervise LAN, Wi-Fi, CCTV, access-control and power infrastructure for renovation and new-build projects across the University, including the KNUST Accra Guest House, the Career Centre, the Biochemistry Teaching Lab and Wilkado Hostel. He served as member and secretary of NOID's Infrastructure Development Committee (2020–2025), representing UITS at the Development Office, and sits on the UITS Procurement Specification and Certification Committee. Since 2021, he has been Project Coordinator of the KNUST–TUM SEED Centre, managing its local activities and its collaboration with nine partner universities in Germany, India, Indonesia, Ethiopia, Uganda, Kenya, Peru, Namibia and Ghana on Sustainable Energies, Entrepreneurship and Development. He has coordinated and hosted the network's annual international symposium at KNUST and taken part in its symposia and workshops in India, Kenya and Germany. His industry experience includes three years as Assistant IT Coordinator at Golden Tulip Kumasi City Hotel, where he contributed to the implementation of the Sage 300 accounting system, the hotel reservation system and security checkpoint systems, as well as IT consultancy for organisations including Ramtech Prestige Ghana Limited, KIVs Hotel and Millennium Promise Alliance. Emmanuel holds a BSc in Computer Science from Garden City University College and an MSc in Information Technology from KNUST, where he is currently pursuing a PhD in Information Technology. His professional qualifications include certificates in Information Security Best Practice, Computer Security Awareness (ICTSA) and Digital Product Development (Technical University of Munich).

ACADEMIC DEGREES EARNED WITH DATES

2023 – Present	PhD Information Technology (in progress), Kwame Nkrumah University of Science and Technology (KNUST), Ghana

2018 – 2020	MSc Information Technology, Kwame Nkrumah University of Science and Technology (KNUST), Ghana
2011 – 2015	BSc Computer Science, Garden City University College, Ghana
2009 – 2011	Diploma in Music Education, Calvary Institute of Music, Ghana
2000 – 2004	Secondary Education, Opoku Oware Senior High School, Ghana

RANKS AND POSITIONS HELD

2021 – Present	*Senior ICT Assistant* - University Information Technology Services (UITS), Kwame Nkrumah University of Science and Technology (KNUST)
2018 – 2021	*Assistant IT Coordinator* - Golden Tulip Kumasi City Hotel
2017 – 2018	*Senior ICT Assistant (Casual)* - University Information Technology Services (UITS), Kwame Nkrumah University of Science and Technology (KNUST)

Item	Role
1.	**Project Coordinator,** KNUST–TUM SEED Centre (2021 – Present)
2.	**Member and Secretary,** Infrastructure Development Committee, NOID (2020 – 2025)
3.	**UITS Representative,** Development Office, KNUST (2020 – 2025)
4.	**Member,** UITS Procurement Specification and Certification Committee (2024)
5.	**Member,** Visibility Committee, Directorate of Student Affairs (2023)
6.	**Member,** Power Assessment Team – Lightning Arresters and Earthing Issues at the Commercial Area (May 2023, Ref: EB/RKOB/001-23)
7.	**UITS Coordinator,** Organising Team for the Virtual Orientation of First-Year Students (2022/2023 Academic Year)
8.	**Member,** UITS IT Support Team, University Hospital (2022 – Present)
9.	**Member,** Execution Team, Students Biometric Exercise across all KNUST campuses (2016 – Present)
10.	**Member,** UITS Support Team, Staff and Student Elections (2016 – Present)

WORK EXPERIENCE

Dec 2021 – Present	**Senior ICT Assistant** - UITS, KNUST Responsible for the day-to-day running of network and ICT systems at the Commercial Area, J. Harper Building (now Directorate of Student Affairs), Administration Block II, Maintenance, Estate Organisation, Security, Photocopy and Transport Department and Procurement.
Oct 2017 – Dec 2020	**Senior ICT Assistant (Casual)** - UITS, KNUST Responsible for the day-to-day running of network and ICT systems at the Commercial Area, J. Harper Building (now Directorate of Student Affairs), Administration Block II,

	Maintenance, Estate Organisation, Security, Photocopy and Transport Department. *Contract periods: Oct 2017 – Feb 2018; Mar 2018 – Jul 2018; Jun 2019 – Dec 2018; Jan 2020 – Dec 2020.*
Nov 2018 – Dec 2021	**Assistant IT Coordinator** - Golden Tulip Kumasi City Hotel – Installed and configured software and hardware, troubleshot and resolved technical issues, monitored and maintained system performance, and provided end-user support for all applications. – Ensured security through access controls and resolved network issues to keep system operations running smoothly. – Proposed alternative printing solutions to reduce supply and maintenance costs, and prepared the inventory of all IT equipment.
Jul 2015 – Dec 2015	**Training Assistant** - Airtel Ghana Limited – Promoted productivity through appropriate allocation of resources, budgets, inventories, training support and team-building materials. – Assisted retailers with the company's business activities on a daily basis.
Jan 2015 – Apr 2015	**Independent Business Owner (IBO)** – YATTEER – IT assistant and part-time online marketer (online trader). – Motivated trainee performance by sparking and maintaining interest in sessions. – Monitored supplier operations to verify quality, delivery schedules and conformance to contract specifications.

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1. Details of Selected ICT Infrastructure Projects Undertaken

2023	**Focus FM Renovation, Great Hall, KNUST** - Member of the Development Office team that designed and proposed a new network infrastructure and cost estimate (CCTV, Wi-Fi and inverter system).
2022	**KNUST Accra Guest House** - Member of the team assigned by the Director of UITS to inspect the ICT infrastructure with the Development Office and design the solution for the proposed renovation (CCTV, LAN, Wi-Fi, access controls and digital doors for the VC's suite and guest rooms). **HOD's Office, Department of Physics** - Helped design and supervise the LAN and Wi-Fi during the renovation of the new office space. **Wilkado Hostel** - Member of the team selected by the Director of UITS to supervise the network infrastructure implementation (LAN, Wi-Fi and CCTV), in collaboration with the Development Office.

2021	**Biochemistry Teaching Lab Renovation** - Member of the team responsible for network redesign, marking and supervision (CCTV, LAN and Wi-Fi).
	Career Centre, KNUST - Supervised the network implementation during the renovation (LAN, Wi-Fi and 3-phase inverter system) and set up all IT devices for the centre's first operations.
2020	**Directorate of Student Affairs, J. Harper Building** - Redesigned the network and IT services for the main office and two conference rooms (CCTV, Wi-Fi, LAN), set up the video-conferencing device and trained staff to operate it.
2017	**Non-Residential Facility 1, opposite Club B** - Redesigned and supervised the network infrastructure, CCTV, Wi-Fi and access controls.
	Development Office Renovation, Kojo Botsio Building - Part of the team that redesigned and supervised the network topologies and IT services.

2. Systems Implementation and IT Consultancy

2019 – 2020	**Golden Tulip Kumasi City Hotel** - Co-redesigned the hotel Wi-Fi for better coverage and reinstalled and configured the CCTV.
	Sage 300 Accounting Software - Co-member of the implementation team, in collaboration with AfroTech Ghana Limited.
	Hotel Reservation System - Co-member of the implementation team, in collaboration with Van Hessen, Belgium.
	Security Checkpoint Devices - Co-member of the team that implemented metal detectors and body scanners.
2020	**Millennium Promise Alliance, Kumasi** - CCTV infrastructure design and implementation.
2019	**KIVs Hotel, Kumasi** - IT consultant; designed the network topologies for the hotel's new block.
2018 – Present	**Ramtech Prestige Ghana Limited** - IT consultant.

3. Research Papers ubmitted for Publication

1. **Emmanuel Boakye**, Frimpong Twum, Yaw Marfo Missah, Eric Opoku Osei and Peter Awudi, *Compression-Aware Lightweight Air-Writing Radar Networks: Quantization and Pruning Analysis of mmDigit*.
2. **Emmanuel Boakye**, Peter Awudi and Kwabena Owusu-Agyemang, *Robust Federated Learning with Context-Hiding Multi-Key Homomorphic Authentication under Non-IID Client Data Distribution*.

PROFESSIONAL QUALIFICATIONS

2024	Certificate in Digital Product Development, Technical University of Munich
2020	Certificate in Information Security Audit, CISA

2019	Certificate in Information Security Best Practice
2016	Certificate in Training in Business Incubation Management, TU Delft
2014	Certificate in Computer Security Awareness, ICTSA
2012	Certificate in Open-Source Software, Ghana-India Kofi Annan Centre of Excellence in ICT

OTHER CERTIFICATES

2024	Future Skills: Key Competencies for a Transforming World (TUM.Africa Talent Program), Munich, Germany
2020	The Louvre Hotels Group University (Training organisation N11770094917)
2019	First Aid at Work Course, St. John Ghana
2018	Certificate in Business Development, CBD KNUST
2017	Certificate, School for Christian Ministry CCC, FCSC
2015	Certificate in Entrepreneurship and Business Development, DAF PLUS
2011	Certificate in Investment, Planning, Entrepreneurship and Corporate Excellence
2010	Certificate in Investment, Planning, Entrepreneurship and Corporate Excellence

INTERNATIONAL CONFERENCES AND WORKSHOPS ATTENDED

2026	Coordinator and host, Annual Symposium on Sustainable Energies, Entrepreneurship and Development, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana, 24th – 28th August, 2024
	Participant, SEED Research Seminar organised by the TUM SEED Center, Munich, Germany, 18th – 30th January, 2026
2025	Participant, Annual Symposium on Sustainable Energies, Entrepreneurship and Development, Technical University of Munich (TUM), Germany, 25th – 29th August, 2025
2024	Participant and coordinator, Annual Symposium on Sustainable Energies, Entrepreneurship and Development, Jomo Kenyatta University of Agriculture and Technology (JKUAT), Kenya, 26th – 30th August, 2024
	Participant, Micro-Grid Optimization Workshop, Munich, Germany, 4th – 8th January, 2024
2023	Participant, Mini-grid Challenges and the Way Forward Workshop, Mumbai, India, 27th – 30th December, 2024
	Participant, "Impact Ventures: Living Labs of the Global South", Center for Sustainable Energies, Entrepreneurship and Development in the Global South, 13th – 15th December, 2023 (online)

	Host coordinator, Annual Symposium on Sustainable Energies, Entrepreneurship and Development, Kwame Nkrumah University of Science and Technology (KNUST), Ghana, 4th – 8th September, 2023
2022	Participant and coordinator, Annual Symposium on Sustainable Energies, Entrepreneurship and Development, Indian Institute of Technology Bombay (IITB), India, 4th – 8th September, 2022

Additional references are available upon request.