

KWABENA ADU-DUODU (MR.)

4th year PhD in Computer Science, Newcastle University, UK

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📍 Newcastle Upon Tyne, United Kingdom

in Kwabena Adu-Duodu

DOCTOR OF PHILOSOPHY (PHD) RESEARCH

A Trusted End-of-life Decision-Making Framework for Circular Supply Chains

School of Computing, Newcastle University

📅 September 2022 – Present

📍 Newcastle University, UK

- Promoting circularity in construction supply chains via digitisation.
- Developed the Circular Construction Product Ontology (CCPO) for product provenance and end-of-life decision making.
- Produced the Human-in-the-loop Semantic Middleware (HiLSeM). A SAAS model for automated compliance assessments for safe reuse of construction products.
- Incorporated Polkadot's Ink smart contracts for trusted and non-repudiable product passports and compliance data.
- Multiple top publications from PhD research.

EXPERIENCES

Research Software Technician (EPSRC Research Project)

School of Computing, Newcastle University

📅 March 2020 – August 2022

📍 UK

- Designed a scalable IoT big-data platform for a university Smart Building, providing APIs and web-based analytics for real-time sensor data.
- Contributed to CI/CD pipelines, version control, automated deployment, and collaborative software development workflows.
- Delivered technical solutions in multidisciplinary research teams and communicated results to academic and industry stakeholders.
- **Research Projects Experience:**
 - Blockchain-based GDPR-compliant multi-cloud data governance system (Ethereum) (PACE – EPSRC).
 - Real-time social media data pipeline for disaster monitoring (Landslide – NERC).
 - Edge resource coordination and load-balancing for IoT-Edge-Cloud systems (Osmotic MindSphere – Research England).
 - Large-scale smart building data integration for 10,000+ sensors with API access (Newcastle Urban Sciences Building).

Customer Support Engineer/ Onsite Engineer

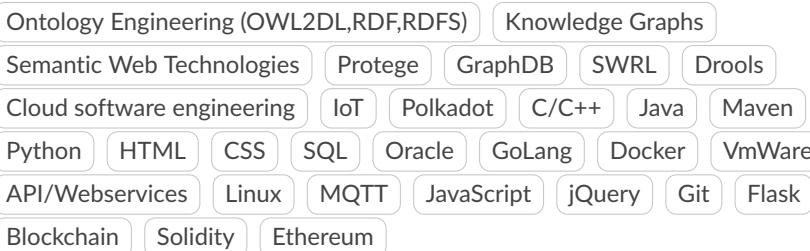
Huawei Technologies

📅 August 2014 – August 2018

📍 Ghana

- Software delivery: Cloud payment system (CPS) deployment; Integration with Oracle DB, external client systems (e.g. SMSC, USSD, STK, Bank)
- Onsite technical support, maintenance operations (e.g patch installation, expansions).
- Platform training for staff.
- Developed technical solutions (software analyst) to customers' requirements.
- Worked in the role of project manager for a number of small projects.

SKILLS



PUBLICATIONS

List of publications can be found on my google scholar profile:

<https://scholar.google.com/citations?user=vKDqmcEAAAAJ&hl=en>

EDUCATION

Advanced Computer Science (MSc)

Newcastle University, UK

📅 September 2018 – August 2019

- Grade: Pass with Distinction | 76.1%

Computer Engineering (BSc.)

Kwame Nkrumah University of Science & Technology, Ghana

📅 September 2010 – August 2014

- CWA (69.37%)

TEACHING EXPERIENCE

Enterprise Middleware (Masters level)

java, quarkus, redhat openshift

📅 2022 – Present

📍 Newcastle University

- MSc. coursework supervision & marking for an online travel agency system (customer bookings for hotel, flight and taxi)

Internet of Things (Masters)

docker, emqx, python, rabbitmq, visualizer

📅 2020 – 2025

📍 Newcastle University

- MSc. coursework supervision & marking for a three-tiered (IoT/edge/cloud) infrastructure. Building data is scraped and transported to the cloud via dedicated pipelines. The data is then fed into an ML model for predictions and visualisation.

Computer Networking

systems basic networking

📅 2024

📍 Newcastle University

- MSc. coursework supervision & marking for basic short tutorial tasks on networking fundamentals like routing, communication algorithms, OSI-layers and the use of a network simulator.

ADDITIONAL INFO

- Languages

English (native)

Twi (mother tongue)

French (50%)

- Outdoorsy - hiking, running, nature lover

REFERENCES

Will be made available on request.