

ASIWOME BOATENG

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PROFESSIONAL SUMMARY

Dynamic Web Developer, Cloud and DevOps Engineer and Materials Engineering PhD candidate with over three years of experience in cloud infrastructure, materials research, and civil engineering for road and transport systems. Proficient in automating AWS deployments using Terraform, Docker, and GitHub Actions, for optimizing pipeline efficiency. Skilled in corrosion inhibition research with peer-reviewed publications and in conducting geotechnical investigations and quality assurance for highway construction projects at the Ghana Highway Authority. Certified Data Analyst Associate (DataCamp), leveraging SQL for data-driven insights. Founded PLASTICO GHANA LTD to produce sustainable construction materials, demonstrating leadership. Committed to delivering innovative solutions across technology, civil, and materials engineering.

EDUCATION

PhD. Materials Engineering	2025 to Date
Kwame Nkrumah University of Science and Technology, Ghana.	
Data Analyst Associate	2024 – April, 2025
DataCamp.	
MPhil. Materials Engineering	2021 – 2024
Kwame Nkrumah University of Science and Technology, Ghana.	
<i>Thesis:</i> Corrosion Inhibition Efficiency of Expired Antimalarial Drugs on 304L and 316L Stainless Steels in Acidic and Basic Media Using Electrochemical Method	
Cloud Computing	2024 to Date
Amazon Web Services	
BSc. Materials Engineering	2016 – 2020
Kwame Nkrumah University of Science and Technology, Ghana	
<i>Thesis:</i> Investigation of the Effects of Heat Treatments on the Microstructure, Mechanical Properties and Corrosion Behaviour of 304L Stainless Steel Weld Metal.	

WORK EXPERIENCE

DevOps Engineer, Terateck Solutions, Kumasi	June 2024 – June 2025
<ul style="list-style-type: none">▪ Designing and implementation of comprehensive Terraform projects, structuring environments and modules for AWS infrastructure.▪ Automating the deployment of CI/CD Backend services to AWS using GitHub Actions and AWS CodeDeploy▪ Utilizing Docker to containerize PHP, WordPress, and Django applications, enhancing deployment efficiency and consistency.▪ Deploying and managing a Django API on AWS EC2 D, utilizing Nginx, Docker, and Let's Encrypt for secure, scalable application management▪ Provisioning and managing of AWS infrastructure using AWS Cloudformation	

- Materials Lab Technician, Ghana Highway Authority, Ho** Aug 2021 – Feb 2022
- Responsible for general management of the laboratory
 - Conducted quality assurance tests on aggregates and concrete, ensuring compliance for various projects, both on site and in the lab.
 - Led geotechnical investigations, analysing soil data to support construction and planning
 - Construction site supervision

- National Service, Ghana Highway Authority, Ho** Sep 2020 – Aug 2021
- Perform gravel exploration and soil sampling for testing
 - Quality control and assurance testing of soil samples and aggregates

PUBLICATIONS

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1. **Boateng, A.**, Arthur, E.K., Gikunoo, E. and Afriyie, E., 2025. Corrosion Inhibition Efficiency of Expired Antimalarial Drugs on Stainless Steels in Acidic and Basic Media. *Results in Surfaces and Interfaces*, p.100414. <https://doi.org/10.1016/j.rsurfi.2025.100414>
 2. Afriyie, E., Arthur, E.K., Gikunoo, E. and **Boateng, A.**, 2025. Bentonite-Assisted Carbonization of Waste Polyethylene Terephthalate Bottles for the Removal of Heavy Metals from Polluted Water. *Results in Surfaces and Interfaces*, p.100406. <https://doi.org/10.1016/j.rsurfi.2024.100406>

PROFESSIONAL ACTIVITIES

Peer Reviewer - Journal of Environmental Chemical Engineering, Elsevier Journals October 2024 to Date

- Conducting thorough reviews of submitted articles, providing feedback on content quality, research methodology, and overall relevance to ensure adherence to high publication standards.

SKILLS (Professional Skills Summary)

Category	Skills
DevOps Tools & Platforms	Terraform, AWS (EC2, S3, IAM, VPC, CodeDeploy, CloudFormation), Docker, GitHub Actions, Nginx, Linux (Ubuntu/CentOS), Bash, Ansible, Let's Encrypt, CI/CD pipelines, CloudWatch
Web & Software Development	JavaScript, TypeScript, React, Next.js, Node.js, Django, Golang, REST API design, HTML, CSS
Cloud & Infrastructure Management	Infrastructure-as-Code (IaC), automation workflows, containerization, load balancing, environment provisioning, SSL/TLS configuration, security hardening
Materials & Engineering Techniques	Materials engineering laboratory testing, civil materials assessment, data interpretation, technical reporting
Data & Database Skills	SQL, data management
Soft & Leadership Skills	Team leadership, collaboration, communication, mentoring, problem solving
Strategic & Business Skills	Business model development, strategic planning, project management, stakeholder engagement
Academic & Editorial Work	Research writing, Elsevier peer review, academic assessment, technical documentation

LICENSES AND CERTIFICATIONS

1. **Data Analyst Associate – DataCamp –** April, 2025
<https://www.datacamp.com/certificate/DAA0010109091137>
2. **Digital Ad Certificate - Digital Marketing** - Aleph Group, Inc 547311430875 – August, 2023
https://learn.digitaladexpert.com/certificate/?course_id=430875&user_id=547311
3. **Sustainable Business Start-ups (SBS) Entrepreneurship Training** – Mastercard Foundation Africa Higher Education Health Collaborative September, 2023

LEADERSHIP

- Founder and C.E.O of PLASTICO GHANA LTD** **September 2023 to Date**
Production of Sand-Plastic Bricks for Sustainable Construction Works
Pioneered production of sand-plastic bricks, advancing sustainable construction.

INTERESTS

- Technology Innovation
- Academic Research and Peer Review