

RAPHAEL AMPONSAH, PhD

Data Product & AI Practitioner · Senior Data Analyst, Consolidated Bank Ghana

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PROFILE

Banking data practitioner who designs, builds, and owns data products end to end inside a live commercial bank. I take data capabilities from business problem to deployed, governed product: a natural-language-to-SQL engine that lets non-technical staff query banking data in plain English, productivity-analytics platforms serving 3,000+ staff, and a real-time core-banking streaming architecture moving the bank toward live operational analytics. PhD in Information Systems and a decade of teaching applied data and AI. Published CGAP/FinEquity (World Bank Group) author on digital financial inclusion, with doctoral fieldwork on trust in financial services.

BANKING & DATA PRODUCT EXPERIENCE

Senior Data Analyst · Consolidated Bank Ghana, Accra 2025 – Present

- Own the design and bank-wide deployment of enterprise data and AI products, working across the full lifecycle from business need to production rollout, adoption, and governance.
- Built and deployed a natural-language-to-SQL engine that lets non-technical business users query banking data in plain English, widening self-service analytics access across the bank without writing code.
- Delivered productivity-analytics platforms serving 3,000+ staff, providing analytics at all organisational levels including location-level performance tracking for management and branch teams.
- Deployed a local large language model on Azure, integrated with the analytics platform and surfaced through Microsoft Teams, so staff interact with their workflow and data through an AI assistant inside the tools they already use.
- Built a self-service data studio enabling business users and analysts to schedule reports, generate visualisations and PDFs, and export encrypted reports, reducing analyst turnaround and report-request load.
- Built a debit and credit analysis system generating charts and visualisations with overdraft, debit, and credit analyses to support account-monitoring and credit decisions.
- Engineered a real-time core-banking data streaming architecture (Kafka / Redpanda, Azure), moving the bank from batch reporting toward live operational analytics.
- Built and deployed a gender-prediction model surfacing gender-disaggregated service gaps in a regulated banking context.
- Authored the SAFER AI Risk Toolkit, a five-pillar AI-governance framework (Safety, Accountability, Fairness, Explainability, Resilience) governing AI deployment in the bank.
- Mentor junior analysts in Python, SQL, NLP, and data engineering.

IT Consultant · Asset Mgmt. Africa (KPMG project); Chartered Institute of Banking 2018 – 2021

- Led needs assessment and agile delivery on a national IT project.
- Led learning-management-system selection and development for the Chartered Institute of Banking.

Programs Manager · SOMPA (Catholic SMA NGO), Accra 2019 – 2022

- Managed educational programmes and fundraising with budget, stakeholder, and strategic-reporting responsibility.

TEACHING & RESEARCH

Lecturer, Computer Science & Information Systems · GIMPA, Accra 2016 – 2024

- Taught across eight years at Ghana's leading public management institution, delivering information systems, software development, programming, business intelligence, e-business, IT project management, and MIS at undergraduate and postgraduate levels (UK Levels 3 to 7).
- Translated current banking and data practice into the classroom, teaching applied data, AI, and digital-finance skills from live industry experience rather than theory alone.
- Supervised postgraduate dissertations, supported doctoral candidates, and contributed to curriculum development and faculty governance.
- Designed and deployed a production AI-assisted Faculty Evaluation System analysing student feedback at institutional scale, an early example of taking a data product from idea to institutional use.
- Ran free public coding boot camps (HTML, CSS, JavaScript, React), extending technical education beyond the classroom into the wider community.

Research Supervisor (Postgraduate) · University of Ghana Business School Ongoing

- Supervise postgraduate research, with doctoral fieldwork and publications centred on trust, digital financial inclusion, and responsible AI.

DATA PRODUCTS & VENTURES

- **OneRubric Ltd (Founder).** AI-powered academic quality-assurance platform owned from concept through product design to a live pilot with GIMPA's quality-assurance directorate, including commercial structuring of the pilot offer. Demonstrates full data-product and go-to-market ownership.
- **SAFER X REDACT.** Independent commercial data-loss-prevention product being brought to market, preventing sensitive data from leaking into cloud AI prompts. Built end to end with a working storefront, payment checkout, cryptographic licensing, and governance documentation. Demonstrates secure-by-design product delivery and commercialisation in a regulated context.

EDUCATION

- **PhD, Information Systems,** University of Ghana Business School, 2026. Thesis: Exploring Trust Dynamics in Ghana's Rural Mobile Money Interactions. Degree awarded 2026, congregation pending.
- **MPhil, Management Information Systems,** GIMPA, Accra, 2016.
- **BSc, Chemistry,** University of Ghana, Accra, 2011.

TECHNICAL SKILLS

Python (pandas, numpy, scipy) · SQL and natural-language-to-SQL · Power BI · NLP (spaCy) · LangChain / LLM engineering · agentic and applied AI application development · Kafka / Redpanda · Azure · full-stack product development (FastAPI, browser extensions, payments and licensing) · data governance and data-loss prevention · qualitative and mixed-methods research design.

PUBLICATIONS & SCHOLARLY OUTPUT

Peer-reviewed and academic

- Amponsah, R., Afful-Dadzie, E., Boateng, R., & Kolog, E. A. (2025). Exploring the role of affordances and constraints in shaping trust within the mobile money ecosystem: A case of rural communities in sub-Saharan Africa. ACIST 2025.
- Afful-Dadzie, E., & Amponsah, R. (in press). Resilient forces, AI and the future of work in public sector administration. In The Routledge International Handbook of Public Administration and Digital Governance (pp. 195-205). Routledge.
- Adu-Mensah, E., Odei-Appiah, S., & Amponsah, R. (2024). When emojis go bad: Emotional and cognitive concerns on their exaggeration, misapplication and excessive usage. International Journal of Social and Humanistic Computing, 4(3), 277-306.
- Kolog, E. A., Odoi Devine, S. N., Egala, S. B., Amponsah, R., Budu, J., & Farinloye, T. (2022). Rethinking the implementation of artificial intelligence for a sustainable education in Africa. In Management and Information Technology in the Digital Era (Vol. 29, pp. 27-46). Emerald.
- Amponsah, R., Boateng, R., & Kolog, E. A. (2021). A semiotic study of lingua-culture of digital paralanguages. AMCIS 2021 Proceedings.

Policy and practitioner

- Amponsah, R. (2026). Who really uses her mobile money account? CGAP/FinEquity blog, FinDev Gateway, World Bank Group (translated into French).
- Amponsah, R. (2026). MISALIGNED: Competitive Strategy, the Equipped Customer, and the Case for Relationship Intelligence Value. SSRN Working Paper 6448258.

Under review and in preparation (selected)

- Amponsah, R., Afful-Dadzie, E., Boateng, R., & Kolog, E. A. Five faces, five trusts: The Dynamic Rural Trust Model and archetypes of mobile money users in sub-Saharan Africa. (Submitted, Information Technology for Development). Further outputs, including TrustLens worldview architecture work (in preparation, Philosophy & Technology), listed on Google Scholar.

REFERENCES

Available on request. Academic referees: Prof. Eric Afful-Dadzie and Prof. Richard Boateng (UGBS), and Prof. Emmanuel Awuni Kolog. Practitioner referee available from the financial sector.