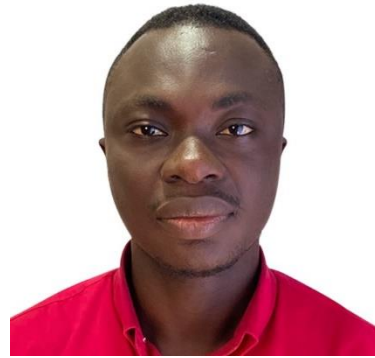EBENEZER KWAW
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Public Health Specialist | Data & ML Practitioner | AI Enthusiast | Future Cybersecurity Analyst | Cloud Engineer in Training | Nutrition Advocate

PROFESSIONAL SUMMARY

I am a dedicated Public Health Specialist with over 7 years of experience designing and implementing community health and nutrition programs. My mission has always been to improve lives using evidence-based strategies and now, I'm enhancing that mission with technology.
Currently, I'm transitioning into a Data & AI Practitioner role, applying machine learning, data analytics, and interactive web apps to solve real-world problems especially in public and preventive health.

I've built full-stack solutions using Python, Streamlit, and scikit-learn and deployed them live for stakeholder use. I've also completed formal training in Data Science, Machine Learning, and Cybersecurity, and I'm currently advancing Cloud Engineering to better manage scalable, secure, and data-driven systems.
I'm passionate about using AI and digital health solutions to improve lives especially in low-resource settings and I'm eager to collaborate on impactful projects in data, healthcare.

3. Skills

- Machine Learning (intermediate)
- Public Health Program Management
- Data Analysis (Python/excel/Power BI/SQL)
- Public Speaking
- Cloud Computing
- Scikit-Learn
- Research
- Leadership
- Communication
- Counselling
- Project Management

4. Education

- BSc. Public Health (Community Nutrition), University for Development Studies (2012–2016)
- Data Science Certificate, Thrive Africa & Koforidua Technical University (2025)
- Machine Learning & AI Certificate, Thrive Africa & Koforidua Technical University (2025)
- Cybersecurity Certificate, Thrive Africa & Koforidua Technical University (2025)
- Data Lab Certificate, World Quant University (Ongoing)
- Advance Cloud Engineer Certificate, (Ongoing)
- Project Management in global Health, University of Washington (2023)
- Monitoring & Evaluation in global Health, University of Washington (2023)

PROFESSIONAL EXPERIENCE

Public Health Specialist | Data & AI Practitioner | Cloud & Cybersecurity Trainee
Self-employed January 2025 – Present. Remote

- Apply data science and AI techniques to address public health problems and build intelligent applications
- Conduct data cleaning, feature engineering, and predictive modelling using Python (pandas, scikit-learn, XGBoost)
- Use data visualization libraries and Streamlit to build and deploy interactive dashboards and web apps
- Leverage public health domain knowledge to design targeted data-driven interventions
- Train in cloud engineering and foundational cybersecurity
- Collaborate with online learning platforms and mentors to enhance real-world skill

- **Key Projects & Achievements**
  ### ITN Usage Prediction Web App
- Developed and deployed a machine learning model to predict insecticide-treated net (ITN) usage among survey respondents
- Built a full-featured Streamlit app with risk segmentation, what-if simulations, and trend monitoring
- Enabled stakeholders to upload CSV, Excel, and Google Sheets for automatic predictions
- Supports malaria prevention and behavioural targeting strategies in public health programs
- GitHub link https://github.com/kwaw-ebn/ITN-Usage-Prediction

- Streamlit web app link https://itn-usage-prediction-nywkrcihz3teyjvze27um8.streamlit.app/

- ◆ **Loan Defaulter Risk Prediction App**
- Built a supervised ML model to classify loan applicants as high or low risk
- Integrated the model into a clean web app using Streamlit, enabling financial institutions to test applicant scenarios in real time
- GitHub link https://github.com/kwaw-ebn/Machine-Learning-Model-to-predict-
- Loan-Defaulters streamlit web app link https://machine-learning-model-to-predict-loan-defaulters-mazkvkvr4t2q.streamlit.app/

- ◆ **Movie Recommendation System**
- Developed a content-based recommender using cosine similarity and metadata features
- Streamlit UI allows users to enter a movie title and receive intelligent viewing suggestions
- GitHub link https://github.com/kwaw-ebn/Movie_Recommendation
- Streamlit link https://movierecommendation-khmzfv7djvecuar2hcmc6j.streamlit.app/

District Nutrition Officer / Public Health Officer
Ghana Health Service, Agona East District Health Directorate | 2021 – Present

- Led the monitoring and evaluation of district-wide public health programs, focusing on COVID-19 vaccination and routine immunization.
- Acted as the district supervisor for National Immunization Day, managing logistics, team coordination, and data collection.
- Served as a key member of the Disease Emergency Preparedness Committee, contributing to the development and implementation of emergency response strategies.
- Provided technical support for risk communication efforts, ensuring accurate and timely dissemination of health information.
- Developed M&E tools and SOPs, facilitating efficient data management and reporting.

District Representative & Program Coordinator (Malaria Elimination Program – IPTp) RootsLink Africa | Ghana | 2023 – Present

- Spearheaded community-level coordination of the malaria elimination program focusing on **Intermittent Preventive Treatment in pregnancy (IPTp)** for pregnant women in Agona East District.
- **Recruited, trained, and supervised community volunteers** for program rollout, with strong emphasis on SBCC (Social and Behavior Change Communication).
- Designed **SBCC flyers and campaign materials** for mass education on malaria prevention and IPTp compliance.
- Developed a **Kobo Collect-based M&E tool** to facilitate real-time data collection, monitoring, and reporting.
- Led **stakeholder engagement and intersectoral collaboration** with health facilities, district authorities, and local partners.
- Authored and submitted periodic feedback reports to **NMEP-Ghana** (National Malaria Elimination Program), contributing to policy review and local health strategies.

Programs Managed

- **Girls' Iron-Folic Tablet Supplementation (GIFTS) Program**
- **Wellness Clinic Coordinator** – Agona East District
- **Training of Nurses on Infant and Young Child Feeding (IYCF)** in collaboration with Kokoplus Ghana.

Serve as a **member of the Agona East District Mid-Term Development Plan Committee**, contributing to district-level health policy and strategic planning.

Research & Innovation Projects (Ongoing)

- **Referral System Strengthening using AI**
  Investigating Ghana's poor referral system. Currently analysing health systems data and applying **machine learning models** to predict referral bottlenecks and design a scalable tech-enabled referral platform.
- **Diabetes Prediction App**
  Completed a data-driven research study on diabetes risk. Currently building a web-based **ML-powered diabetes risk prediction app** for early detection and education.
- **Anaemia in Pregnancy Intervention (36th Week Focus)**
  Designing a public health intervention and mobile app to tackle high anaemia rates

among pregnant women. ML models will be used to predict anaemia risks and guide behavior change strategies for frontline health workers.

Nutritionist
Samartex Hospital, [Samreboi, Ghana] | 2018 – 2021

- Designed and implemented nutrition programs targeting vulnerable populations, including malnutrition prevention and treatment initiatives.
- Collaborated with health authorities to integrate nutrition services into primary healthcare delivery.
- Conducted regular monitoring and evaluation of program outcomes, making data-driven recommendations for improvement.

Nutritionist
Shama Health Center, Ghana Health Service | 2016 – 2017

- Provided nutrition counseling and support to patients, focusing on dietary management of chronic diseases.
- Participated in community outreach programs to raise awareness about nutrition and healthy living.
- Assisted in the collection and analysis of health data to inform program planning.

Research Contributor
Published Research in the British Journal of Medicine
2017

- **Title:** Assessing the Prevalence of Hypertension and Obesity Among Diabetics in Tamale Metropolis
- **Collaborators:** K. Opare-Asamoah (Lead Lecturer)
- **Contributions:** Assisted with research design, data collection, and analysis.
- **Link to research:** https://www.researchgate.net/profile/Yussif-Adams/publication/315943323_Assessing_the_Prevalence_of_Hypertension_and_Obesity_among_Diabetics_in_the_Tamale_Metropolis_Ghana/links/5f40c768a6fdcccc43e55e10/Assessing-the-Prevalence-of-Hypertension-and-Obesity-among-Diabetics-in-the-Tamale-Metropolis-Ghana.pdf

REFERENCES

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