Godfred S. Gyimah, PhD

● **DATA & AI STRATEGY ● DATA SCIENCE ● AI ● ML ● TECH LEADERSHIP ● DELIVERY MANAGEMENT ●**

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Objective: Leverage 14+ years of experience as an Applied AI / Machine Learning PhD, Sr. Data Scientist, Data Science Tech Lead and Program Manager to deliver impactful Data, ML and AI solutions that solve complex business challenges.

RECENT HANDS-ON PROJECTS (ML & GENERATIVE AI)

- **ML-powered apps for agronomy:** Trained Machine Learning ensemble models for soil moisture and temperature predictions based on weather data. Deployed the models as web services using docker and gradio (sample web app demo).
- **ChatDoctor - A Chatbot for disease diagnosis and treatment:** Developed a virtual primary care assistant which provides disease diagnosis and advice, based on doctor-patient conversation logs from 100,000 hospital visits. This LLM app leverages OpenAI's GPT-3.5 transformer model, LangChain, LlamaIndex and Retrieval-Augmented Generation (RAG)
- **Zero-Shot Learning:** Performed Zero-Shot image classification with OpenAI's CLIP Transformer model and Zero-Shot object detection with Google's OWL-ViT Transformer model. Conducted text prompt experiments to improve inference.
- **Tableau Dashboards:** A compilation of Tableau dashboards from previous projects (Link to dashboards).

RELEVANT WORK EXPERIENCE

ENGTEC USA LLC

Position: Principal Consultant, Data & AI / ML   *Jan. 2018 to present (6+ years)*

- Working with clients to translate their data into technical solutions for analytics and AI pain points.
- Providing data strategy consulting and guiding third-party technology vendor assessments.
- Produce data visualizations, dashboards and actionable insights from client data.

OPORTUN INC.   Silicon Valley, CA

Position: Director, Data & AI / ML   *Mar. 2022 to Nov. 2023 (1 year, 9 months)*

Principal Manager, Data & AI / ML Products

- **Key impact:** Led an MLOps team to build an enterprise ML / AI microservice for automated model deployment and serving, which reduced model productionisation time from 2 sprints (~6 weeks) to within 1 business day.
- **Key impact:** Led data ingestion pipeline projects to migrate data into Data Lake, for enabling end-to-end Machine Learning.
- Led the vision in the development of an online feature store for serving features to production AI / ML models in real-time.
- Led the development of automated drift monitoring and continuous model retraining services for production models.
- Developed and presented AI/ML platform roadmap and progress to key executive leaders, including the CPO, CTO, CAIO.
- Developed and managed a cross-functional team of offshore and onshore Engineers and Data Scientists.
- Drove clear product vision, roadmap and requirements prioritization to achieve business goals.
- Led decision-making and collaborations on Data and AI / ML governance and third-party vendor assessments.

BAYER AG   Saint Louis, MO

Position: Senior Data Scientist & Technical Lead   *Jan. 2018 to Mar. 2022 (4 years, 3 months)*

- **Key impact:** Led an MLOPs team to develop a web-based AI/ML platform that reduced model development and deployment time by over **50%** across NA, EMEA and LATAM regions.
- **Key impact:** Led a Data Science team to build ML & AI solutions, which automated field data collection. This reduced the cycle time by **~75% globally** and resulted in annual savings of about **1.6 million man-hours** in 2021.
- Drove the development and integration of a web-based annotations application that facilitated groundtruth data collection.
- Designed machine learning (ML) systems, run experiments, fine-tuned, deployed and monitored production models for drift.
- Developed RACI models to manage stakeholder engagement and communicate effectively to ensure continued alignment of program scope, status, risks, and dependencies.

INSIGHT DATA SCIENCE   Manhattan, NY

Artificial Intelligence Fellow   *July - December, 2017 (6 months)*

- Developed a ResNet50 CNN model for diagnosing skin diseases (actinic keratosis, basal cell carcinoma, dermatofibroma, melanoma, nevus, pigmented benign keratosis, vascular lesions) with ~87% accuracy using the ISIC 2016 dataset.
- Executed the Fully Convolutional Neural Network for Cardiac MRI Segmentation by Tran, 2017 with ~85% test accuracy.
- Implemented a 3D CNN action recognition model with 89% accuracy and 92% recall using Python and Keras.

MISSOURI UNIVERSITY OF SCIENCE & TECHNOLOGY   Rolla, MO

PhD Research Assistant (Project Management, Machine Learning & Numerical Modeling)   *August 2014 – June 2018 (4 years)*

- Implemented a deep learning model for machine vision in mining and construction environments using Single Shot Detection and the Tensorflow object detection API. The model achieved over 90% performance upon pilot phase testing.
- Developed and validated a novel method for calibrating DEM parameters using the XGBoost algorithm. The method combines numerical simulation of triaxial rock testing with ML to achieve prediction accuracies of up to 95.54%.
- Created and validated a 3D numerical model for studying the failure patterns of geomaterials during rock excavations.
- Developed and managed laboratory projects for over 200 undergraduate students annually.

HUAWEI TECHNOLOGIES   Accra, Ghana

Position: Solutions Engineer - Analytics   *May 2010 – September 2013 (3 years, 5 months)*

- Performed customer analytics studies and led end-to-end analytics projects for revenue forecasting, customer churn and sentiment analyses.
- Created visualizations to communicate insights and made presentations to technical and non-technical audiences.
- Partnered with internal clients to provide business intelligence / insights from customer data on telecom products. Produced exploratory and descriptive analytics for customer segmentation, sales promotion and targeted marketing.

EDUCATION

MISSOURI UNIVERSITY OF SCIENCE & TECHNOLOGY   Rolla, MO

- *PhD, Engineering (GPA: 4.0 / 4.0)*   Aug. 2014 – June 2018
- *Graduate Certificate, Business Analytics & Data Science (GPA: 4.0 / 4.0)*   Aug. 2016 – May 2017
- *MS, Engineering (GPA: 4.0 / 4.0)*   Aug. 2014 – July 2016

UNIVERSITY OF LEEDS   Leeds, England

- *MS, Engineering*   Sep. 2013 – Aug. 2014

KWAME NKRUMAH UNIVERSITY OF SCIENCE & TECHNOLOGY   Kumasi, Ghana

- *BS, Engineering*   Aug. 2006 – June 2010

RELEVANT COMPETENCY AREAS

- **Data, AI & ML Tools:** Python, R, AWS (SageMaker, etc), Azure ML, Tensorflow, Huggingface, PyTorch, Keras, Scikit-Learn, MLLib, Caret, Weka, RStudio, H2O, OpenCV, Jupyter Notebook, MLFlow, Gradio, Streamlit, Docker
- **Data Storage & Transformation:** MySQL, AWS (Athena, S3, DynamoDB, Redshift, Glue), Pandas, MongoDB, HDFS
- **Data Visualization & Automation:** Alteryx, Knime, Tableau, Power BI, Looker, ggplot2, matplotlib
- **Leadership Skills:** Strategy, Team Building, Project Management, Prioritization, Roadmapping, Execution, People Management, Risk management, Schedule & Cost management, Stakeholder management
- **Cloud Computing Platforms:** AWS, Databricks, Microsoft Azure, Google Cloud Platform, DataRobot, Domino DataLab.