SIBITENDA HARRIET:

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Professional Summary

Senior ICT professional, systems architect, and AI researcher with a PhD in Computer Science and over 10 years' experience in information systems, digital platforms, data infrastructure, and ICT-enabled service delivery in academic and research environments. Proven track record in designing, deploying, and publishing scalable AI solutions for social impact, including healthcare and policy. Skilled in developing and deploying robust ML systems with Docker, Kubernetes, and CI/CD. Published in top venues (IEEE Access, ICMLA, Springer). Passionate about advancing responsible AI and mentoring future tech leaders.

Education

- PhD, Computer Science: Worcester Polytechnic Institute (USA) and Université Gaston Berger (Senegal), 2020 - 2024
- Postgraduate Certificate, Machine Learning and Data Engineering: 10 Academy (Ethiopia/USA), 2021
- MSc, Information Systems: Uganda Martyrs University, 2016
- BSc (Hons), Computer Studies and Mathematics: Busitema University, 2012

Technical Skills

Programming	Python, R, Java, C++, JavaScript
ML/DL Frameworks	PyTorch, TensorFlow, Hugging Face
MLOps	Docker, Kubernetes, MLflow, CI/CD
Cloud/Data	AWS, GCP, Azure, Spark, SQL, Power BI

Professional Experience

PhD Researcher: Worcester Polytechnic Institute and Université Gaston Berger (2020 - 2024)

- Developed and deployed LLM-based models for topic, sentiment, and entity analysis.
- Published 5+ peer-reviewed papers in IEEE Access, ICMLA, and Springer.
- Designed scalable ML pipelines leveraging Docker, Kubernetes, and CI/CD for deployment.

Machine Learning Engineer (Trainee): 10 Academy (2021)

- Built and operationalized ML models for real-world applications using MLOps best practices.
- Implemented CI/CD pipelines, containerization (Docker), orchestration (Kubernetes), and automated testing workflows.

Lecturer: Uganda Martyrs University (2019 - Present)

- Teach and design curricula for systems design, software engineering, and databases.
- Supervise student research projects in AI and systems development.

ICT and Mathematics Teacher: London College of St. Lawrence Maya / Buddo SS (2012 - 2019)

- Led ICT curriculum delivery and departmental leadership.
- Delivered instruction in mathematics and computer studies to high school students.

Key Projects

- LLM-Powered Social Media Analysis: Leveraged GPT/BERT-based models for integrated sentiment, topic, and entity analysis (ICMLA 2024).
- AI for Social Data: Built architecture to process millions of African social media comments for policy insights (IEEE Access 2024).
- AI for Agriculture: Developed deep learning models for real-time detection of crop pests.
- Predictive Analytics in Education: Modeled student performance using predictive algorithms to improve outcomes.

Professional Certifications

- Postgraduate Certificate in Machine Learning and Data Engineering, 10 Academy

Publications

- Extracting Semantic Topics About Development in Africa From Social Media, IEEE Access, 2024
- Leveraging LLMs for Integrated Sentiment and Topic Analysis on African Social Media, ICMLA 2024
- Temporal Analysis of Social Concerns on African Social Media, Springer, 2024

Honors and Leadership

- PASET RSIF PhD Scholarship, ICIPE, Kenya (2020 - 2024)
- Ugandan Government National Merit Award for top undergraduate performance
- Vice Chair, Student Association (Busitema); President, Campus Newsletter; Choir Leader
- Panelist, Digital Innovation for Africa (RSIF-PASET Conference, Morocco, 2022)

References

- Prof. Elke Rundensteiner: Professor, Worcester Polytechnic Institute, USA, Email: rundenst@wpi.edu | Phone: +1 (508) 831-5815
- Dr. Awa Diattara: Associate Professor, University of Gaston Berger, Senegal, Email: awa.diattara@ugb.edu.sn | Phone: +221 781332151
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