Daniel Ogenrwot

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Summary

🔖 Daniel is a Computer Science researcher and innovator with a great passion for building technical solutions to solve community challenges. He has worked with several organization to support the set-up of cloud infrastructures and CI/CD pipelines. He designs tools for automation of processes between software and data science team to ensure fast and reliable product delivery. His current research focuses on Software Design (Anti-patterns & Role stereotypes), Empirical Software Research, Mining Software Repositories (MSR), Software Re-engineering and Machine Learning in Software Engineering. Daniel holds a MSc. Computer Science from Makerere University and BSc. Computer Science from Gulu University. He is self-driven, loves learning and sharing knowledge within a team of diverse setting.

Employment Experience

JAN 2022 – Present

🔖 **Assistant Lecturer**
Department of Computer Science.
Gulu University
https://gu.ac.ug

AUG 2019 – Present

🔖 **Software Engineer & Research Fellow**
AirQo Project, College of Computing and Information Sciences.
Makerere University
https://airqo.net

JAN 2017 – DEC 2021

🔖 **Teaching Assistant (Graduate Trainee)**
Department of Computer Science.
Gulu University
https://gu.ac.ug

DEC 2016 – DEC 2017

🔖 **Head of Technical Department**
Zoom Wireless ISP / SINFA Uganda Ltd.
Note: This project officially ended in 2020

MAY 2014 – NOV 2016

🔖 **Network Operation Centre (NOC) Engineer**
Zoom Wireless ISP / SINFA Uganda Ltd.
Note: Project officially ended in 2020

DEC 2012 – MAR 2014

🔖 **Micro Worker**
Sama Uganda
https://www.sama.com/

Education

2023 – Present   🔖 **PhD in Computer Science, University of Nevada-Las Vegas**

2018 – 2020   🔖 **M.Sc. Computer Science, Makerere University**
Thesis title: *Using Machine Learning to Understand the Association of Design Smells with Role Stereotypes in Software Systems.*
CGPA: 4.47 of **5.00**

2010 – 2013   🔖 **B.Sc. Computer Science, Gulu University**
Project Report Title: *Contextually and Geographically Relevant Ads Placement System.*
CGPA: 4.48 of **5.00 (First Class Honours)**

Research Publications

Journal Articles

1 Okure, D., **Ogenrwot**, **D.**, Bbaale, M., & Bainomugisha, E. (2023). Data management in resource-limited settings: Unpacking the role of robust digital solutions for air quality data management in african cities.

2 Sserunjogi, R., Ssematimba, J., Okure, D., **Ogenrwot**, **D.**, Adong, P., Muyama, L., … Bainomugisha, E. (2022). Seeing the air in detail: Hyperlocal air quality dataset collected from spatially distributed airqo network. *Data in Brief*, *44*, 108512.

3 **Ogenrwot**, **D.**, Nakatumba-Nabende, J., & Chaudron, M. R. (2021). Integration of design smells and role-stereotypes classification dataset. *Data in Brief*, *36*, 107125.

4 Ashaba, A. A., Mirembe, D. P., Tumusiime, R., & **Ogenrwot**, **D.** (2019). A rule induction attribution selection algorithm for intrusion detection systems. *International Journal of Technology and Management*, *4*(1), 14–14.

Conference Proceedings

1 Adong, P., Okure, D., Nsimbe, N., Odur, J., Ssematimba, J., Sserunjogi, R., … Smith, M. et al. (2022). Sensor calibration to enhance large-scale low-cost air quality monitoring in sub-saharan africa. In *Fall meeting 2022*. AGU.

2 **Ogenrwot**, **D.**, Tabo, G. O., Aber, K., & Nakatumba-Nabende, J. (2022). From undergraduate (software) capstone projects to start-ups: Challenges and opportunities in higher institutions of learning. In *Proceedings of the federated africa and middle east conference on software engineering* (pp. 73–82).

3 Okure, D., Bainomugisha, E., **Ogenrwot**, **D.**, Sserunjogi, R., Adrine, P., Okello, G., … Ssematimba, J. (2022). Building an africa-focused framework for air quality management: The role of low-cost sensors and digital platforms for effective data management and engagement for action. In *Fall meeting 2022*. AGU.

4 **Ogenrwot**, **D.**, Nakatumba-Nabende, J., & Chaudron, M. R. (2020). Comparison of occurrence of design smells in desktop and mobile applications. In *Acse*.

Masters Dissertation

1 **Ogenrwot**, D. (2021). *Using machine learning to understand the association of design smells with role-stereotypes in software systems*. Makerere University.

Undergraduate Project Report

1. **Ogenrwot, D.** (2013). *Contextually and geographically relevant ads placement system*. Gulu University.

Teaching Experience

Master Level

- Database Modeling - [2019, 2021, 2022].
- Mobile Applications Development - [2019, 2021, 2022].

Undergraduate Level

- Parallel Computation.
- Integrative Programming.
- Web Systems & Technologies II.
- Mobile Application Development in Java.
- Mobile Web Application Development.

Supervision Experience

Undergraduate

2023
- An Interactive Multimedia Learning Application for Kindergarten in Uganda. *Completed*
- Medication Reminder and Adherence System. *Completed*

2022
- TraceX: A Mobile Application for Verifying the Authenticity and Originality of ICT Products. Members: Kiiza Trevour, Kansiime Kenneth, Oketch Edward. *Completed*
- Medicine Authentication System. Members: Brian Okwairwoth Ojuk, Vivian Akot, Wilber Asiime. *Completed*

2021
- Smart Soil Analyzer. Members: Alinda Fortunate, Mahirwe Jovile, Mujunante Wensi. *Completed*
- Smart Fish Pond Monitoring System. Members: ONEN Geoffrey, AYURA Florence, HERBERT Sebaggala. *Completed*

2018
- Automated Android Hardcopy Document Digitizer (AHDD) Application. Members: Ochola Samuel, Anek Diana and Obalim Douglas Francis. *Completed*

Research Collaborations

- Prof. Dr. Michel R.V. Chaudron - Eindhoven University of Technology, Netherlands
- Prof. Dr. Engineer Bainomugisha - Makerere University, Uganda
- Dr. Arif Nurwidyantoro - Gadjah Mada University, Indonesia
- Mr. Satrio Adi Rukmono (PhD Student) - Eindhoven University of Technology, Netherlands
- Dr. Joyce Nabende - Makerere University, Uganda
- Dr. Drake Patrick Mirembe - Makerere University, Uganda

Skills

Languages
- Strong reading, writing and speaking competencies for English and Luo.

Coding
- Python, Java, PHP, R, SQL, …

Skills (continued)

Databases	🔖	Mysql, Postgresql, sqlite, MongoDB, BigQuery.
Web Dev	🔖	Html, css, JavaScript, Apache Web Server, NginX.
Misc.	🔖	Linux administration, Cloud computing, DevOps, Git & GitHub, Academic writing, Teaching, LaTeX, . . .

Miscellaneous Experience

Awards and Achievements

2019	🔖	**MTN MOMO Open API Challenge**, 1st Runner Up in the transport category.

Certification

2022	🔖	**IETLS**. British Council
2020	🔖	**Huawei Certified ICT Associate-Artificial Intelligence (HCIA-AI)**. Huawei
	🔖	**Google Cloud**. Google Africa Developers Training Program. Certificate of Course Completion
	🔖	**Cloud Application Developer 2019 - Mastery Award** . IBM Cloud.
	🔖	**Cloud Application Developer 2019 - Explorer Award** . IBM Cloud.
2016	🔖	**IELTS**. British Council

References

Prof. Engineer Bainomugisha
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College of Computing and Information Sciences
Makerere University, Uganda
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Dr. Joyce Nabende
Head, Makerere University Artificial Intelligent Lab
(MakAIR)
Makerere University, Uganda
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Dr. Benedict Oyo
Dean, Faculty of Science
Gulu University, Uganda
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EAISI High Tech Systems
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