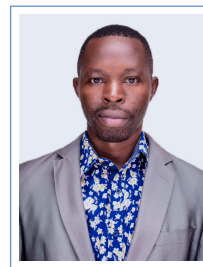


# Daniel Ogenrwot

Ph.D Cand., Computer Science

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*"And you will know the truth, and the truth will set you free."*

YESHUA, A.D 2000

## Experience

2023

**Graduate Research/Teaching Assistant**, Department of Computer Science, University of Nevada Las Vegas (UNLV), Las Vegas, Nevada, United States.

<https://unlv.edu>

2022

2023

**Assistant Lecturer**, Department of Computer Science, Gulu University.

<https://gu.ac.ug>

2023

**Ph.D Research Fellow**, AirQo Project, College of Computing and Information Sciences, Google.org Impact Challenge Project, Makerere University.

<https://airqo.net>

2019

2022

**Software Engineer**, AirQo Project, College of Computing and Information Sciences, Google.org Impact Challenge Project, Makerere University.

<https://airqo.net>

2017

2021

**Teaching Assistant (Graduate Trainee)**, Department of Computer Science, Gulu University.

<https://gu.ac.ug>

2016

2017

**Head of Technical Department**, Zoom Wireless ISP/SINFA Uganda Ltd., Note: Project officially ended in the year 2020.

2014

2016

**Network Operation Centre (NOC) Engineer.**

Zoom Wireless ISP/SINFA Uganda Ltd.

Note: Project officially ended in the year 2020

2012

2014

**Micro Worker**, Sama Uganda., <https://www.sama.com>.

## Education

2023

**Ph.D. in Computer Science**, University of Nevada Las Vegas (UNLV).

Las Vegas, Nevada, United States

◦ Advisor (s): Dr. John Businge

Current 4.00/4.00 (Distinction)

CGPA :

2018

2020

**MSc. in Computer Science**, Makerere University, Kampala, Uganda.

◦ Advisor (s): Dr. Joyce Nakatumba-Nabende & Prof. Michel Chaudron

◦ Thesis: *Using Machine Learning to Understand the Association of Design Smells with Role Stereotypes in Software Systems.*

CGPA : 4.47/5.00 (Distinction)

2010

2013

**BSc. in Computer Science**, Gulu University, Gulu, Uganda.

◦ Advisor (s): Dr. Geoffrey Andogah

◦ Project Report: *Contextually and Geographically Relevant Ads Placement System.*

CGPA : 4.48/5.00 (First Class Honours)

## Research Area

### Software Engineering

- Software vulnerability analysis
- Software maintenance and reuse
- Software variants (social forks and divergent forks)
- Software evolution
- Code & Design smells detection
- Version control systems

### ML/AI

- Automatic program repair
- Agentic LLM for software systems
- Generative Adversarial Networks (GANs)
- AI4Science

### Data Mining

- Mining Software Repositories
- Graph mining
- Dependency network analysis

## Certifications

2025

### Microsoft.

GitHub Copilot

2023

### Elsevier.

Certified Peer Reviewer

2023

### UNLV Alliance of Professionals of African Heritage.

Certificate of Academic Excellence

2022

### IETLS.

British Council Professional English Language Certificate with overall band score of 7.0

2020

### Huawei Certified ICT Associate-Artificial Intelligence (HCIA-AI).

Huawei

2020

### Google Cloud, Certificate of Completion.

Google Africa Developers Training Program

2020

### Cloud Application Developer 2019, Mastery Award.

IBM Cloud

2020

### Cloud Application Developer 2019 , Explorer Award.

IBM Cloud

## Publications

### Book Chapters

- 2025 **Deo Okure, Engineer Bainomugisha, Ogenrwot, Daniel, Richard Sserunjogi, Priscah Adrine, and Gabriel Okello**, *Case Study of Participatory Data-Driven Approaches to Improve Urban Air Quality in Kampala, Uganda*, JHU Press, 2025.

### Journal Articles

- 2025 Blessing U Mberu, Elaine O Nsoesie, Mansoureh Abbasi, Priscah Adrine, Femi Ola Aiyegbajeje, Edward Asemadahun, Engineer Bainomugisha, Elizabeth Bakibinga, Pauline Bakibinga, Donatien Beguy, **Ogenrwot, Daniel**, et al. *Urban Health in Africa*. Johns Hopkins University Press, 2025.

- 2022 Richard Sserunjogi, Joel Ssematimba, Deo Okure, **Daniel Ogenrwot**, Priscilla Adong, Lillian Muyama, Noah Nsimbe, Martin Bbaale, and Engineer Bainomugisha. Seeing the air in detail: Hyperlocal air quality dataset collected from spatially distributed airqo network. *Data in Brief*, volume 44, page 108512, 2022.
- 2021 **Daniel Ogenrwot**, Joyce Nakatumba-Nabende, and Michel R.V. Chaudron. Integration of design smells and role-stereotypes classification dataset. *Data in Brief*, volume 36, page 107125, 2021.
- 2019 Anthony Arthur Ashaba, Drake Patrick Mirembe, Robert Tumusiime, and **Ogenrwot, Daniel**. A rule induction attribution selection algorithm for intrusion detection systems. *International Journal of Technology and Management*, volume 4, pages 14–14, 2019.

#### In Conference Proceedings

- 2026 **Ogenrwot, Daniel**, John Businge, and Shaikh Arifuzzaman. Structural and connectivity patterns in the maven central software dependency network. In Nick Rahimi, Venkat Margapuri, and Noor Amiri Golilarz, editors, *Software and Data Engineering*, pages 129–151, Cham, 2026. Springer Nature Switzerland.
- 2026 Richard Sserunjogi, **Ogenrwot, Daniel**, Nicholas Niwamanya, Noah Nsimbe, Martin Bbaale, Benjamin Ssempala, Noble Mutabazi, Raja Fidel Wabinyai, Deo Okure, and Engineer Bainomugisha. Design and evaluation of a scalable data pipeline for ai-driven air quality monitoring in low-resource settings. In Nick Rahimi, Venkat Margapuri, and Noor Amiri Golilarz, editors, *Software and Data Engineering*, pages 212–231, Cham, 2026. Springer Nature Switzerland.
- 2025 **Ogenrwot, Daniel** and John Businge. Refactoring-aware patch integration across structurally divergent java forks. In *2025 IEEE International Conference on Source Code Analysis & Manipulation (SCAM)*, pages 25–36, 2025. Distinguished Artifact Award.
- 2024 **Ogenrwot, Daniel** and John Businge. Patchtrack: Analyzing chatgpt's impact on software patch decision-making in pull requests. In *Proceedings of the 39th IEEE/ACM International Conference on Automated Software Engineering, ASE '24*, page 2480–2481, New York, NY, USA, 2024. Association for Computing Machinery.
- 2024 **Daniel Ogenrwot**, Joyce Nakatumba-Nabende, John Businge, and Michel R. V. Chaudron. Empirical investigation of the relationship between design smells and role stereotypes. 2024.
- 2023 Deo Okure, **Ogenrwot, Daniel**, Noah Nsimbe, Lillian Muyama, Priscilla Adong, Richard Sserunjogi, Martin Bbaale, and Engineer Bainomugisha. Data management in resource-limited settings: Unpacking the role of robust digital solutions for air quality data management in african cities. 2023.
- 2022 **Ogenrwot, Daniel**, Geoffrey Olok Tabo, Kevin Aber, and Joyce Nakatumba-Nabende. 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, FAMECSE '22*, page 73–82, New York, NY, USA, 2022. Association for Computing Machinery.
- 2022 Deo Okure, Engineer Bainomugisha, **Ogenrwot, Daniel**, Richard Sserunjogi, Priscah Adrine, Gabriel Okello, Priscilla Adong, Martin Bbaale, and Joel Ssematimba. 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, 2022.
- 2022 Priscilla Adong, Deo Okure, Noah Nsimbe, Joseph Odur, Joel Ssematimba, Richard Sserunjogi, Deo Okedi, **Ogenrwot, Daniel**, Martin Bbaale, Michael Smith, et al. Sensor calibration to enhance large-scale low-cost air quality monitoring in sub-saharan africa. In *Fall Meeting 2022*. AGU, 2022.
- 2020 **Ogenrwot, Daniel**, Joyce Nakatumba-Nabende, and Michel RV Chaudron. Comparison of occurrence of design smells in desktop and mobile applications. In *ACSE*, 2020.

## Reports & Thesis & Dissertations

- 2020 **Ogenrwot, D.**, (2021). Using machine learning to understand the association of design smells with role-stereotypes in software systems. *MSc. Computer Science Thesis*, Makerere University, Kampala, Uganda.
- 2013 **Ogenrwot, D., Drani, A., Wandarah, C. & Odong, M.**, (2013). Contextually and geographically relevant ads placement system. *BSc. Computer Science Project Report*, Gulu University, Gulu, Uganda.

## Presentations

### Conference Presentations

- 2025 **Refactoring-Aware Patch Integration Across Structurally Divergent Java Forks**, *The University of Auckland, New Zealand*.  
The 25th IEEE International Conference on Source Code Analysis and Manipulation (SCAM)
- 2025 **Structural and Connectivity Patterns in the Maven Central Software Dependency Network**, *Holiday Inn Downtown Superdome, New Orleans, Louisiana, USA*.  
The 34th International Conference on Software Engineering and Data Engineering (SEDE)
- 2025 **Design and Evaluation of a Scalable Data Pipeline for AI-Driven Air Quality Monitoring in Low-Resource Settings**, *Holiday Inn Downtown Superdome, New Orleans, Louisiana, USA*.  
The 34th International Conference on Software Engineering and Data Engineering (SEDE)
- 2024 **PatchTrack: Analyzing ChatGPT's Impact on Software Patch Decision-Making in Pull Requests**, *Sacramento, California, USA*.  
The 39th IEEE/ACM International Conference on Automated Software Engineering (ASE)
- 2023 **Data management in resource-limited settings: Unpacking the role of robust digital solutions for air quality data management in African cities**, *Austria Center, Vienna, Austria*.  
The 2023 European Geosciences Union Assembly (EGU'23)

### Invited Talks

- 2020 **Topic: Introduction to Machine Learning**, *Google DevFast, Gulu Chapter, Uganda*.

## Teaching

### Teaching Assistantship at University of Nevada, Las Vegas, U.S.A

- 2023 **Fall/Spring: CS472/672-1001 Software Product Development I**, *Enrollment: 80*.  
Undergraduate Senior Design
- 2023 **Summer: CS477/677 Design and Analysis of Algorithms**, *Enrollment: 30*.  
Undergraduate/Graduate
- 2024 **Fall/Spring: C472/672-1001/1002 Software Product Development I**, *Enrollment: 60/45*.  
Undergraduate Senior Design
- 2024 **Spring: CS472/672-1002 Software Product Development I**, *Enrollment: 50*.  
Undergraduate Senior Design
- 2025 **Fall: CS472/672-1001/1002 Software Product Development I**, *Enrollment: 25/40*.  
Undergraduate Senior Design
- 2025 **Fall: CS789 - Software Re-engineering**, *Enrollment: 13*, *Advanced Topics in Computer Science*.  
Graduate Level

## Teaching at Gulu University, Gulu City, Uganda

2022

### Instructor.

- MID7104 Database Modeling - Graduate
- MID7109 Mobile Applications Development - Graduate
- GCS3203 Parallel Computation
- GIT3104 Integrative Programming
- GIT3101 Web Systems & Technologies II
- GCS3204 Mobile Application Development in Java
- GCS3102 Mobile Web Application Development
- GAT3201 Web Game Development

2021

### Instructor.

- MID7104 Database Modeling - Graduate
- MID7109 Mobile Applications Development - Graduate
- GCS3203 Parallel Computation
- GIT3104 Integrative Programming
- GIT3101 Web Systems & Technologies II
- GCS3204 Mobile Application Development in Java
- GCS3102 Mobile Web Application Development

2019

### Instructor.

- MID7104 Database Modeling - Graduate
- GIT3104 Integrative Programming
- GIT3101 Web Systems & Technologies II
- GCS3204 Mobile Application Development in Java
- GCS3102 Mobile Web Application Development

2018

### Instructor.

- GIT3101 Web Systems & Technologies II
- GCS3204 Mobile Application Development in Java
- GCS3102 Mobile Application Development

## Honors & Awards

2025

**Distinguish Artifact Award**, The 25th IEEE International Conference on Source Code Analysis and Manipulation (SCAM).

2025

**GPSA Research Grant**, Amount: \$1,249, Graduate & Professional Student Association (GPSA), UNLV.

Research Grant

2024

**UNLV Access Grant**, Amount: \$2,000, University of Nevada, Las Vegas.  
Grant

2024

**Roy and Helen Kelsall Scholarship Fund**, Amount: \$1,000, College of Engineering, University of Nevada, Las Vegas, Awarded for academic excellence.

Scholarship

2024

**GPSA Research Grant**, Amount: \$1,456, Graduate & Professional Student Association (GPSA), UNLV.

Research Grant

2019

**MTN MoMo Open API Challenge — 1st Runner-Up (Transport)**, Prize: \$2,000, MTN Mobile Money.

Competition Award

2018

**Makerere University / Sida (Swedish Government) Two-year scholarship**, Total value: \$10,000, Makerere University / Sida (Swedish Government) Two-year scholarship.

Scholarship

2013

**First-Class Honours, BSc Computer Science**, Gulu University, Uganda. Offered Teaching Assistant position.

Academic Distinction

## Supervision and Mentorship

### Graduate Research

2025

**Grant Katureebe**, *Master of Science in Information and Communication Technology for Development (ICT4D)*, Gulu University, Research Topic: Designing a Low-Cost Multimodal Internet of Things Sensor Network for Hyperlocal Air Quality Monitoring in Uganda: A Case Study of Gulu City.

Status: Ongoing

### Ungraduate (Group) Capstone Projects

2022

**Kiiza Trevour; Kansime Kenneth; Oketch Edward**, *BSc. Computer Science / Bachelor of Information and Communication Technology*, **Project:** TraceX: A Mobile Application for Verifying the Authenticity and Originality of ICT Products.

Status: Completed

2022

**Brian Okwairwoth Ojuk, Vivian Akot, Wilber Asiime**, *BSc. Computer Science / Bachelor of Information and Communication Technology*, **Project:** Medicine Authentication System.

Status: Completed

2021

**Alinda Fortunate, Mahirwe Jovile, Mujunante Wensi**, *BSc. Computer Science / Bachelor of Information and Communication Technology*, **Project:** Smart Soil Analyzer.

Status: Completed

2021

**Onen Geoffrey, Ayura Florence, Sebaggala Herbert**, *BSc. Computer Science / Bachelor of Information and Communication Technology*, **Project:** Smart Fish Pond Monitoring System.

Status: Completed

2021

**Ochola Samuel, Anek Diana, Obalim Douglas Francis**, *BSc. Computer Science / Bachelor of Information and Communication Technology*, **Project:** Automated Android Hardcopy Document Digitizer (AHDD) Application.

Status: Completed

## Professional Services

### PC Member

Junior PC Member at the 23rd International Mining Software Repositories Conference

### Reviewer

- Springer Nature Scientific Reports
- Data in Brief Elsevier Journal
- Journal of Advances in Information Technology

### Academic Membership

- ACM
- IEEE
- The United States Research Software Engineer Association (US-RSE)

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## Referees

**Dr. John Businge**

*Assistant Professor, Department of  
Computer Science*  
University of Nevada Las Vegas, USA  
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✉ john.businge@unlv.edu

**Dr. Joyce Nakatumba-Nabende**

*Lecturer, Department of  
Computer Science*  
Makerere University, Uganda  
☎ +256 (776) 555992  
✉ joyce.nabende@gu.ac.ug

**Prof. Dr. Michel R.V. Chaudron**

*Professor, Department of  
Mathematics & Computer Science*  
Eindhoven University of Technology, Netherlands  
☎ +31 (6) 34182257  
✉ m.r.v.chaudron@tue.nl

**Dr. Benedict Oyo**

*Assoc. Professor, Department of  
Computer Science*  
Gulu University, Uganda  
☎ +256 (787) 067441  
✉ b.oyo@gu.ac.ug