

CURRICULUM VITAE

Alunyu Andrew Egwar

Email: aalunyu@gmail.com Skype: [andy.alunyu](https://www.skype.com/user/andy.alunyu)

Telephone (Mob) +256-772 898977 / +256-702 898977

PROFESSIONAL PROFILE

Alunyu Andrew Egwar, is a lecturer of computer engineering, Busitema University. He has grown through the University ranks from Teaching Assistant (2007 – 2009) at Gulu University to Lecturer (August, 2009) at Busitema University. He has participated in curriculum development and review of different academic programmes in the departments of Computer Engineering, Information Technology and Computer Science at Busitema University and Gulu University respectively. On his record over 10 years of teaching of undergraduate students and Four years of postgraduate teaching. Andrew has experience in supervision of student's research and often guiding the students to publish outputs of their research.

Andrew completed a BSc with Education (Mathematics and Physics) of Mbarara University of Science & Technology and subsequently MSc in Data Communications and Software Engineering of Makerere University. He enrolled for a PhD in Information Systems at Makerere University and submitted his thesis on the 6th of February 2023 for examination.

Having published research findings with high quality publishers like IEEE, his research interests includes power optimization in wireless networks; standardization of electronic health systems; Internet of things & smart systems; and collaboration engineering for repetitive group tasks. For his PhD studies he is currently working on standards for electronic health technology (Communication Infrastructure) to support health information exchange in health systems in Uganda.

A. BIODATA

First name: Andrew
Family name: Alunyu Egwar
Date of birth: 23rd March 1976
Place of birth: Kwania, Apac District
Nationality: Ugandan
Marital Status: Married, Three Children
Current Address: Faculty of Engineering,
Busitema University Box 236, Tororo
Telephone (Mob): +256-772-898-977 / +256-702-898-977
Email: aalunyu@gmail.com
Skype [andy.alunyu](https://www.skype.com/user/andy.alunyu)

B. EDUCATIONAL RECORD

Year	University and the Award
2016 – date	Makerere University and pursuing a PhD in Information systems of Makerere University. Researching in standardization of the digital health communication infrastructure to supporting health information exchange in Uganda's health system (Submitted on 6th February 2023 for examination)
2005–2010	Makerere University and earned a degree of master of science in data communications and software engineering of Makerere university (both Course work and Thesis)
1997 – 2000	Mbarara University of science and Technology and earned a degree of bachelors of science with education (Physics & Mathematics) of Mbarara University of Science and Technology
Secondary	
1995 – 1997	Lango College and earned the Uganda Advanced Certificate of Education – Advanced Level
1991 – 1994	Comboni College and earned the Uganda Certificate of Education – Ordinary level

C. PROFESSIONAL CERTIFICATES

Sept-Dec 2022	Certificate in Planning National Digital Health Systems – USAID-Blended Course.
July 2019	Certificate in Advanced Qualitative Data Analysis. 15 th – 26 th July, 2019. The course content include Introduction to Social Research, Theoretical traditions and foundations in qualitative research, characteristics and rationale in qualitative research, rigor and

credibility in qualitative research, ethics in qualitative research, sampling and sample size in qualitative research, qualitative research methods, designing qualitative research instruments, practical data collection in the community, data management/ transcription/coding, Introduction to Atlas ti/Electronic coding and analysis, and reporting qualitative results among others.

- January 2019 Certificate in ‘Quantitative Data Analysis’ Awarded by School of Statistics and Applied Economics, Makerere University. 7th – 25th January, 2019
- May 2018 Certificate in ‘Introduction to Geographic Information Systems Training II’ Awarded by School of Computing and Informatics Technology, Makerere University, 1st – 3rd May, 2018
- March 2018 Certificate in ‘Scholarly Writing and Communication Skill’ Awarded by Makerere University directorate of research and graduate training, 20th – 23rd March, 2018
- October 2017 Certificate in ‘Introduction to Geographic Information Systems Training’ Awarded by School of Computing and Informatics Technology, Makerere University, 3rd – 4th October, 2017
- July 2017 Certificate in ‘Advanced Research Methods’ Awarded by Makerere University directorate of research and graduate training, 10th – 21st July, 2017
- July 2017 Certificate in ‘Working with Literature’ Awarded by Stellenbosch University, African Doctoral Academy, African Centre for Scholarship, joint Doctoral School, Makerere University, 6th – 7th July, 2017
- June 2017 Certificate in ‘Philosophy of Methods’ Awarded by Makerere University directorate of research and graduate training, 12th – 23rd June, 2017
- March 2017 Certificate in ‘Information Competence and management’ Awarded by Makerere University Library, supported by Makerere University directorate of research and graduate training 27th February – 3rd March, 2017.
- February 2010 Certificate in design of an appropriate and feasible improvement plan for a university study programme from the East African Quality Coordinators Course B, Awarded by DAAD, Nairobi Kenya, 1st – 4th February, 2010
- April 2006 CISCO Certificate in designing and building Cisco WAN infrastructure Awarded by Cisco Networking Academy

D. LECTURING/TEACHING EXPERIENCE

August, 2009 – date	Lecturer, Department of Computer Engineering, Faculty of Engineering, Busitema University
August, 2007 – May, 2009	Visiting Lecturer, Department of Computer Science, Faculty of Science, Gulu University
June 2004 – August, 2007	Education Officer, Uganda Ministry of Education and Sports
Jan, 2000 – June, 2004	Class Teacher, St. Katherine Secondary School, Lira

E. RECENT SUPERVISION OF POSTGRADUATE STUDENTS

Student & Programme Thesis and Period of Supervision

Makheti Alex (Master of Computer Forensics)	A Process Model to Enhance the Accuracy of Digital Forensic Investigations: A case of National Identification and Registration Authority (NIRA-Uganda) <i>Supervised between 2020 – 2022</i>
Mboto Peter (Master of Computer Forensics)	Comparative Analysis and Development of Mobile Device Authentication Framework for Corporate Networks <i>Supervised between 2020 – 2022</i>
Wafula, John Bosco (Master of Computer Forensics)	An application-based framework for curbing mobile phone-related crimes: Results of a preliminary study in Eastern Uganda <i>Supervised between 2020 – 2022</i>
Kisembo Isaac Moses (Master of Computer Forensics)	An algorithm for improving email security on the android operating system in the industry 4.0 era <i>Supervised between 2019 – 2021</i>

F. OTHER PROFESSIONAL TASKS

- (i). Conducted a landscape analysis of constituent components of the digital health communication infrastructures in Uganda's health system to determine what exist, gaps/hindrances to interoperable implementations of the digital health interventions/solutions impeding access to reliable, timely and integrated patient data (Ministry of Health - Uganda: Jan – June 2020).
- (ii). Developed a process for determining suitable digital health standards for Uganda's ministry of health in fulfilment of the ministry's eHealth Strategic Plan 2020/21 – 2024/25 (Makerere University Kampala: Jan 2018 – Dec 2022)
- (iii). Developed contextual standards for Uganda's digital health communication infrastructure to streamline procurement and implementation of standardized infrastructure to support health information exchange in Uganda healthcare (Makerere University Kampala: Jan 2018 – Dec 2022).

- (iv). Development of a digital health standardization framework to guide Uganda's ministry of health determine, implement and monitor compliance with the country's digital health standards for the digital health communication infrastructure (Makerere University Kampala: Jan 2018 – Dec 2022).
- (v). Conducted a scoping literature review of the digital health training curriculum in the African region plus prominent universities in the US and United Kingdom and proposed a curriculum for training Digital Health Workforce for the African region (*Journal of Health Informatics in Africa*, 2020).
- (vi). Conducted a systematic literature review of electronic health initiatives and interventions used for data capture in public health, social, and clinical care in low-and middle-income countries (MRC–UK, 2020 – 2021).
- (vii). Conducted an exploratory study of the readiness of existing digital health systems for malaria and HIV as potential demonstrator conditions for and HER data capture and processing system infrastructure and analytical methods that could support Uganda's Ministry of Health and related health institutions to provide responsive care and interventions on real-time surveillance (MRC–UK, 2019 – 2022).
- (viii). Developed a collaborative process to conduct curriculum review including health informatics curricular (Makerere University, 2018).
- (ix). Reviewed curriculum for Bachelors of Computer Engineering of Busitema University, 2011.
- (x). Part of team that developed curriculum for Diploma in Electrical Engineering curriculum development, Busitema University, 2015.
- (xi). Reviewed curricular for Bachelors of Computer Science and Bachelors of Information Technology Curriculum of Gulu University, 2009

G. PUBLICATIONS / PRESENTATION AT INTERNATIONAL CONFERENCES

Journal Publications

1. Nabukenya, J., **Alunyu, A. E.**, Drumright, L., Semwanga, A. R., & Kasasa, S. (2023). Feasibility and utility of Point-of-Care electronic clinical data capture in Uganda's healthcare system: A qualitative study. *Journal of the American Medical Informatics Association*, ocad034. DOI: <https://doi.org/10.1093/jamia/ocad034>
2. **Alunyu, A. E.**, Wamema, J., Kiwanuka, A., & Bagyendera, M. (2020). Factors that Influence Potential Success of eHealth Standards Adoption in a Low- and Middle-Income Country: a review. *Journal of Health Informatics in Africa*, 7(1), 24 - 37. DOI: <https://doi.org/10.12856/JHIA-2020-v7-i1-274>
3. **Alunyu, A. E.**, Munene, D., & Nabukenya, J. (2020). Towards a Digital Health Curriculum for Health Workforce for the African Region: A Scoping Review. *Journal of Health Informatics in Africa*, 7(1), 38 - 54. DOI: <https://doi.org/10.12856/JHIA-2020-v7-i1-265>

4. **Alunyu, Egwar, A., & Nabukenya, J.** (December, 2018). A Conceptual Model for Adaptation of eHealth Standards by Low and Middle-Income Countries. *J Health Inform Afr.* 2018;5(2):10-16. DOI: <https://doi.org/10.12856/JHIA-2018-v5-i2-199>

Conference Proceedings

1. **Alunyu, A.;** Wamema, J.; Kiwanuka, A.; Bagyendera, M.; Amiyo, M.; Kambugu, A. and Nabukenya, J. (2021). Investigating the Impediments to Accessing Reliable, Timely and Integrated Electronic Patient Data in Healthcare Sites in Uganda. In *Proceedings of the 14th International Joint Conference on Biomedical Engineering Systems and Technologies - Volume 5 HEALTHINF: HEALTHINF*, ISBN 978-989-758-490-9, pages 522-532. DOI: [10.5220/0010266705220532](https://doi.org/10.5220/0010266705220532)
2. Kiwanuka, A.; Bagyendera, M.; Wamema, J.; **Alunyu, A.;** Amiyo, M.; Kambugu, A. and Nabukenya, J. (2021). Establishing the State of Practice about Data Standards in Monitoring Healthcare Interventions for HIV in Uganda's EMR-based Health Information Systems. In *Proceedings of the 14th International Joint Conference on Biomedical Engineering Systems and Technologies - Volume 5 HEALTHINF: HEALTHINF*, ISBN 978-989-758-490-9, pages 200-211. DOI: [10.5220/0010264302000211](https://doi.org/10.5220/0010264302000211)
3. **Egwar, A.,** Ssekibuule, R. and Nabukenya, J. (February, 2020). Towards Adoption of Standards for Communication Infrastructure/Technologies in Healthcare Systems in LMICs: Theories, Practice and Evaluation. In *Proceedings of the 13th International Joint Conference on Biomedical Engineering Systems and Technologies (BIOSTEC 2020) - Volume 5: HEALTHINF*, pages 735-744. ISBN: 978-989-758-398-8. DOI: [10.5220/0009171907350744](https://doi.org/10.5220/0009171907350744)
4. **Egwar, A.,** Ssekibuule, R. and Nabukenya, J. (February, 2020). Status of Resources for Information Technology to Support Health Information Exchange in Resource-constrained Settings. In *Proceedings of the 13th International Joint Conference on Biomedical Engineering Systems and Technologies (BIOSTEC 2020) - Volume 5: HEALTHINF*, pages 463-471. ISBN: 978-989-758-398-8. DOI: [10.5220/0008970004630471](https://doi.org/10.5220/0008970004630471)
5. **Alunyu, A. E.,** Ocen, G. G., Odongtoo, G., Matovu, D., Kiwanuka, A., & Eilu, E. (2019, May). Standards for Sensor Technologies that Support Mobile Patient Health Monitoring in Resource Constrained Settings. In *2019 IST-Africa Week Conference (IST-Africa)* (pp. 1-10). IEEE. DOI: [10.23919/ISTAFRICA.2019.8764823](https://doi.org/10.23919/ISTAFRICA.2019.8764823)
6. **Alunyu, Egwar, A.,** Bwire, F., Arinaitwe, I., Male, V., Mpirirwe, H., Baguma, K., ... & Nabukenya, J. (2018, January). A Collaborative Curriculum Review: Applicability to Higher Education Institutions. In *Proceedings of the 51st Hawaii International Conference on System Sciences*. <http://hdl.handle.net/10125/49939>

7. **Egwar, A. A., & Rai, I. A.** (2009, August). Power aware differentiated routing (padr) in wireless sensor networks. In *2009 Proceedings of 18th International Conference on Computer Communications and Networks* (pp. 1-6). IEEE. DOI: [10.1109/ICCCN.2009.5235218](https://doi.org/10.1109/ICCCN.2009.5235218)

H. RESEARCH INTERESTS

- Planning implementation and or auditing information systems
- Standardization of electronic health systems
- Applying the enterprise architecture to optimize organisations' use of ICT implementations to meet their strategic and business goals.
- Developing collaboration engineering processes for repetitive group tasks
- Optimizing sensor applications
- Development and application of IoT and smart systems

I. REFERENCES

1. **Josephine Nabukenya (PhD)**

Professor, Information Systems & Health Informatics

Founder & Chairperson, Health Informatics Research Group (Makerere University)

P.O. Box 7062, Kampala, Uganda

Tel: +256-414-540628 / +256 776 658800

Email: josephine@cit.ac.ug

2. **Gilbert Gilbreys Ocen (PhD)**

Director, Directorate of ICT,

Busitema University,

P. O Box 236, Tororo, Uganda

Tel: +256- 700767590 / +256-779394120

Email: gilbertocen@gmail.com

3. **Joseph Wamema**

Regional Analyst – East African Community

Vital Wave, Inc

555 yant Street #226

Palo Alto, CA 94301

Tel: +256-778666622 / +256-702959735

Email: joseph.wamema@vitalwave.com

Certification

I declare that this curriculum vitae is current and correctly describes me, my qualifications and experience.

Signed:  on 10th March 2023

Full name: **Mr. Alunyu Andrew Egwar**, BSc Educ (MUST), MSc DCSE (Mak), PhD Student (Mak)