

Jackson Kamiri Wambugu

(PHD IT -Ongoing), Master of Science in Information Technology, Bachelor of Business Information Technology- First class Honours)

PERSONAL INFORMATION

Nationality	Kenyan
Gender	Male
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Postal Address	75-10200, Murang'a

PROFESSIONAL BODY MEMBERSHIP

1. Association for Computing Machinery (ACM), Membership Number: **2420288**
2. Association of Computing Professionals of Kenya (ACPK), Membership Number: **PM000632.**
3. International Association of Engineers (IAENG), Membership Number: **519702**

BRIEF PROFILE

I am a Tutorial Fellow in the department of Information Technology, School of Computing and Information Technology, Murang'a University of Technology. I hold Master of Science in Information Technology and Bachelor of Business Information Technology (First Class Honours) degrees from Murang'a University of Technology, currently I am pursuing Doctor of Philosophy in Information Technology. My area of specialization is in the field of Artificial Intelligence subfield of Machine Learning. As a Tutorial Fellow I have been involved in

CURRICULUM VITAE

research work, teaching undergraduate and diploma students, serving in several University committees, and other administrative duties. I am a hardworking person, a team player, passionate about continuous improvement, and committed to delivering quality results.

EDUCATION BACKGROUND

YEAR(s)	QUALIFICATION	INSTITUTION
2023-To date	Doctor of Philosophy in Information Technology (ongoing)	Murang'a University of Technology
2020-2022	Master of Science in Information Technology	Murang'a University of Technology
2015-2019	Bachelor of Business Information Technology- First Class Honours	Murang'a University of Technology
2011-2014	Kenya Certificate of Secondary Education	Naromoru Mixed Secondary School

OTHER QUALIFICATIONS/ CERTIFICATIONS EARNED

Qualification Earned	Awarding Organization
Artificial Intelligence Analyst Mastery Award	IBM Skills Academy
HCIA-Artificial intelligence	Huawei ICT Academy
ISO 9001:2015 and ISO27001:2013 Standards Audit Certification	Maier Consulting

AWARDS EARNED

- 1) Murang'a University of Technology Graduate Assistant Scholarship-Scholarship to pursue Master degree.

EMPLOYMENT/ WORK EXPERIENCE

May 2023- To date

Tutorial Fellow

Murang'a University of Technology

Reporting to the Chairman Department of Information Technology, School of Computing and Information Technology

Responsibilities:

- Conducting Research
- Teaching Undergraduate courses
- Setting and Administering examinations
- Supervision of undergraduate students' research projects
- Assessment of students on industrial attachment
- Marking examinations and processing student's marks
- Assisting in department's and school's management activities
- Mentoring Students
- Curriculum development and review
- Member of department of IT board of examiners
- Member of the School of Computing and IT board of Examiners
- Membership in various University committees and subcommittees

November 2019 -May 2023

Graduate Assistant

Murang'a University of Technology

Reporting to the Chairman Department of Information Technology, School of Computing and Information Technology

Responsibilities:

- Conducting Research
- Teaching Diploma and Certificate courses
- Setting and Administering examinations
- Marking examinations and processing student's marks
- Assessment of students on industrial attachment
- Assisting in department's and school's management activities
- Mentoring Students
- Curriculum development and review
- Member of department of IT board of examiners
- Member of the School of Computing and IT board of Examiners
- Membership in various University committees and subcommittees

UNIVERSITY ADMINISTRATIVE DUTIES:

- March 2024-To date; Internal Management Systems Auditor- Responsibilities include:
 - i. Auditing the University's Quality management Systems (QMS) based on ISO9001:2015 Standard
 - ii. Auditing the University's Information Security Management Systems (ISMS)based on ISO 27001:2013 Standard
 - iii. Preparing audit reports and ensuring corrective actions are implemented.
- Member of the Murang'a University of Technology Institutional Research Ethics Review Committee (ISREC)
- Member of the Murang'a University of Technology Board of Artificial Intelligence Committee
- School of Computing and Information Technology PC& ISO (*ISO 9001:2015 andISO 27001:2013 standards*) champion
- Coordinating Diploma programmes in the School of Computing and IT (2019-2022)
- Served as a member of the Secretariat subcommittee and program &publications subcommittee during the 2nd MUT International Conferences held on November 2023.
- Served as member of two graduation subcommittees namely; Entertainment subcommittee, Invitations, Luncheon Cards & Program subcommittee) during the 7th MUT graduation ceremony
- Served as a secretariat to the committee responsible for Organizing the 1st MUT International Conferences held between 3rd to 5th November 2021.

August 2019 - September 2019

Digitization program clerk

Civil Registration Department Murang'a East

Reporting to the Civil Registrar Murang'a East, Ministry of Interior and coordination of national government.

Responsibilities

- Data entry.
- Data verification.

RESEARCH WORK

A Multi-task Deep Neural Network Model for Medical Image Segmentation and Classification-

Proposed PhD IT research

A Transfer Learning and Two-Level Hyperparameters Optimization Based Model for Improved Classification of Diabetic Retinopathy- *MSc. IT Thesis work*

PEER REVIEWED PUBLICATIONS

- [1] **J. Kamiri** and G. Mariga, “Research Methods in Machine Learning: A Content Analysis”, IJCIT, vol. 10, no. 2, Mar. 2021, <https://doi.org/10.24203/ijcit.v10i2.79>.
- [2] **J. Kamiri**, G. Mariga, and A. Oirere, “A Systematic Literature Review of Meta-Learning Models for Classification Tasks,” *Int. J. Comput. Appl. Technol. Res.*, vol. 11, no. 03, pp. 56–65, 2022, doi: 10.7753/ijcatr1103.1002.
- [3] **J. Kamiri**, G. M. Wambugu, and A. M. Oirere, “A Comparative Study of Deep Learning and Transfer Learning in Detection of Diabetic Retinopathy,” *Int. J. Comput. Appl. Technol. Res.*, vol. 11, no. 07, pp. 247–254, 2022, doi: 10.7753/ijcatr1107.1001.
- [4] Onyango, K. A., **Kamiri, J.**, & Muketha, G. M. (2023). A comparative study of the lexicographical complexity of Java, Python and C languages based on program characteristics. *Journal of Innovation, Technology and Sustainability*, 1(1), 42-67.
- [5] **J. Kamiri**, G. M. Wambugu, and A. M. Oirere, “Multi-task deep learning in medical image processing: A systematic review,” 2025.
- [6] **J. Kamiri**, G. M. Wambugu, and A. M. Oirere, “An empirical analysis of encoder-decoder (U-Net) variants for medical image segmentation,” 2025.

CONFERENCES ATTENDED

1. Murang’a University of Technology International Conference on Technology and Innovation for sustainable development (3rd to 5th November 2021)
2. 8th Dedan Kimathi University of Technology STI&E International Conference (6th to 8th November 2024)

SKILLS AND COMPETENCIES

PROFESSIONAL/TECHNICAL SKILLS:

- Conducting Scholarly research
- Curriculum development and implementation
- Lecturing
- Internal management Systems Auditing
- Setting and administering examinations.
- Processing examination results
- Java programming.
- Python Programming
- Artificial Intelligence
- Machine Learning
- Deep Learning
- TensorFlow Framework
- Pytorch Framework
- Network designing and implementation.
- MYSQL database administration.
- Software testing and installation.
- Computer hardware maintenance.
- Data analytics.
- Visual programming
- Springboot.
- Long-term and short-term businessplanning.
- Industry trends analysis.
- Customer relationship management.

SOFT SKILLS:

- Excellent Written and Spokencommunication Skills.
- Good analytical skills.
- Good research and reporting skills.
- High levels of creativity.
- Highly organized.
- Trained peer counsellor (certified).

