



COMM'R. Dr. PETER APPIAHENE

SENIOR LECTURER AND HEAD, DEPARTMENT OF INFORMATION TECHNOLOGY
AND DECISION SCIENCES
UNIVERSITY OF ENERGY AND NATURAL RESOURCES, GHANA
MEMBER, ELECTORAL COMMISSION OF GHANA

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Box 214 Sunyani, Bono, Ghana

ONLINE DETAILS

Google Scholar: <https://scholar.google.com/citations?user=TAYKVm8AAAAJ&hl=en>

Research Gate: https://www.researchgate.net/profile/Peter_Appiahene

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=57198347514>

ORCID: orcid.org/0000-0002-6098-4537

LinkedIn : <https://www.linkedin.com/in/peter-appiahene-phd-592452144/>

PROFESSIONAL SUMMARY

A Senior Lecturer with over 10 years teaching experience in the Computer Science industry and academic institutions both domestic and international. Team player with excellent administrative skills and effective leadership style that promote a simulating working environment. Excel in dynamic demanding environment while remaining pragmatic and focused with the ability to successfully work to tight schedules and deadlines. As a professional teacher, I also have the ability to teach and develop others to achieve their full potentials. I have a PhD in Computer Science with ICT4 Development, Data Science, Machine Learning, Artificial Intelligence and Digitization as my current research areas. I also have Algorithms and Theory, Artificial intelligence, Data Science, AR/VR, Graphics and Visualization and Information Systems as my current teaching areas .I am Reviewer for International refereed journals such as Journal of Supercomputing and conferences with a number of publications in International journals and conference proceedings. I am currently a Senior Lecturer and Head of Department of Information Technology and Decision Sciences at the University of Energy and Natural Resources, Ghana. I am also a member of the Governing Council of the University of Energy and Natural Resources. I am also a member of the Electoral Commission of Ghana appointed under Article 70 of the 1992 Constitution of Ghana.

CURRENT RESEARCH FOCUS

ICT4 Development, Data Science, Machine Learning, Artificial Intelligence and Digitization

CURRENT TEACHING AREAS

Mobile Computing, Algorithms and Theory, Artificial intelligence, Data Science, AR/VR, Graphics and Visualization

EDUCATION

1. Ph.D. | Kwame Nkrumah University of Science and Technology-Ghana

Dissertation: A Combined Model of Data Envelopment Analysis with Machine Learning Algorithms for Predictions.

*Aug 2016 –
Feb 2021*

OTHER PROFESSIONAL QUALIFICATIONS

Certified Oracle Programmer

PUBLICATIONS

1. Adu, W. K., **Appiahene, P.**, & Afrifa, S. (2023). VAR, ARIMAX and ARIMA models for nowcasting unemployment rate in Ghana using Google trends. *Journal of Electrical Systems and Information Technology*, 10(1), 1–16. <https://doi.org/10.1186/s43067-023-00078-1>
2. Afrifa, S., Varadarajan, V., **Appiahene, P.**, Zhang, T., & Domfeh, E. A. (2023). Ensemble Machine Learning Techniques for Accurate and Efficient Detection of Botnet Attacks in Connected Computers. *Eng*, 4(1), 650–664. <https://doi.org/10.3390/eng4010039>
3. Afrifa, S., Zhang, T., Zhao, X., **Appiahene, P.**, & Yaw, M. S. (2023). Climate change impact assessment on groundwater level changes: A study of hybrid model techniques. *IET Signal Processing*, April. <https://doi.org/10.1049/sil2.12227>
4. **Appiahene, P.**, Asare, J. W., Donkoh, E. T., Dimauro, G., & Maglietta, R. (2023). Detection of iron deficiency anemia by medical images: a comparative study of machine learning algorithms. *BioData Mining*, 16(1), 1–20. <https://doi.org/10.1186/s13040-023-00319-z>
5. **Appiahene, P.**, Chaturvedi, K., Asare, J. W., Donkoh, E. T., & Prasad, M. (2023). CP-AnemiC: A conjunctival pallor dataset and benchmark for anemia detection in children. *Medicine in Novel Technology and Devices*, 18(May), 100244. <https://doi.org/10.1016/j.medntd.2023.100244>
6. Asare, J. W., **Appiahene, P.**, Arthur, E. J., Korankye, S., Afrifa, S., & Donkoh, E. T. (2023). Detection of anemia using conjunctiva images: A smartphone application approach. *Medicine in Novel Technology and Devices*, 18(April), 100237. <https://doi.org/10.1016/j.medntd.2023.100237>
7. Asare, J. W., **Appiahene, P.**, & Donkoh, E. T. (2023). Detection of anaemia using medical images: A comparative study of machine learning algorithms – A systematic literature review. *Informatics in Medicine Unlocked*, 40(May), 101283. <https://doi.org/10.1016/j.imu.2023.101283>
8. Bruce, M. R., Adekoya, A. F., Boateng, S., & **Appiahene, P.** (2022). Comparative Analysis of Taxation Techniques and Models used in Digital Economy. *International Journal of Economics and Financial Issues*, 12(6), 22–29. <https://doi.org/10.32479/ijefi.13544>

9. Bruce, M. R., Adekoya, A. F., Boateng, S., & **Appiahene, P.** (2023). Prevalent User-centered Monetization Techniques in Social Media. *International Review of Management and Marketing*, 13(1), 19–28. <https://doi.org/10.32479/irmm.14005>
10. Iddrisu, I., **Appiahene, P.**, Appiah, O., & Fuseini, I. (2023). Exploring the Impact of Students Demographic Attributes on Performance Prediction through Binary Classification in the KDP Model. *Knowledge Engineering and Data Science*, 6(1), 24–40.
11. Issah, I., Appiah, O., **Appiahene, P.**, & Inusah, F. (2023). A systematic review of the literature on machine learning application of determining the attributes influencing academic performance. *Decision Analytics Journal*, 7(October 2022), 100204. <https://doi.org/10.1016/j.dajour.2023.100204>
12. **Peter, A.**, Yaw, M. M., Rose-Mary, O. M. G., Adu-Gyamfi, D., & Micheal, O. (2022). Predicting the operational efficiency of banks using their Information Technology: Decision tree algorithm approach. *Information Technologist (The)*, 19(1), 37–57.
13. Siaw-Yeboah, F., Adebayo, F. A., **Appiahene, P.**, & Weyori, B. A. (2022). GHBS-13 as an enhanced EAN-13 barcode module for monitoring processed consumable products in Ghana. *Engineering Reports*, May 2022, 1–12. <https://doi.org/10.1002/eng2.12612>
14. Aazagreyir, P., **Appiahene, P.**, Appiah, O., & Boateng, S. (2022a). An Integrated Fuzzy Multi-Criteria Decision-Making Methods for Service Selection : A Systematic Literature Review and Meta- Analysis. *Journal of Theoretical and Applied Information Technology*, 100(15), 4671–4697.
15. Aazagreyir, P., **Appiahene, P.**, Appiah, O., & Boateng, S. (2022b). Gis-Based Fuzzy Multi-Criteria Decision Making Methods: a Systematic Review and Meta-Analysis. *Journal of Theoretical and Applied Information Technology*, 100(14), 5119–5133.
16. Afrifa, S., Zhang, T., **Appiahene, P.**, & Varadarajan, V. (2022). Mathematical and Machine Learning Models for Groundwater Level Changes: A Systematic Review and Bibliographic Analysis. *Future Internet*, 14(9), 259. <https://doi.org/10.3390/fi14090259>
17. **Appiahene, P.**, Missah, Y. M., Gyening, R.-M. O. M., Adu-Gyamfi, D., & Opoku, M. (2022). Predicting the Operational Efficiency of Banks Using Their Information Technology: Decision Tree Algorithm Approach. *The Information Technologist: An International Journal of Information and Communication Technology (ICT)*, 19(1).
18. Junior, M. A., **Appiahene, P.**, & Appiah, O. (2022). Forex market forecasting with two - layer stacked Long Short - Term Memory neural network (LSTM) and correlation analysis. *Journal of Electrical Systems and Information Technology*, 1, 1–24. <https://doi.org/10.1186/s43067-022-00054-1>

19. Kutiname, S., Millham, R., Adekoya, A. F., Tettey, M., Weyori, B. A., & **Appiahene, P.** (2022). Application of Machine Learning Algorithms in Coronary Heart Disease : A Systematic Literature Review and Meta-Analysis. *International Journal of Advanced Computer Science and Applications*, 13(6), 153–164.
20. Nimbe, P., Yeng, P. K., Okyere, E., Weyori, B. A., Adekoya, A. F., **Appiahene, P.**, Nyarko-boateng, O., Nti, I. K., & Domfeh, E. A. (2022). Innovative Approaches to Classical and Quantum Reflected Binary Code Generation using Pascal Triangle , Reversible N-Input C-Gate and Reversible N-Input Q-Gate. *Journal of Algebraic Statistics*, 13(3), 4708–4734.
21. Paul Aazagreyir, **Appiahene, P.**, Appiah, O., & Boateng, S. (2022). An integrated fuzzy-Vikor-Dematel-Topsis technique for assessing QoS factors of SOA. *International Journal of Advanced and Applied Sciences*, 9(10), 149–165. <https://doi.org/10.21833/ijaas.2022.10.018>
22. **Appiahene, P.**, Missah, Y. M., & Najim, U. (2020). Predicting Bank Operational Efficiency Using Machine Learning Algorithm : Comparative Study of Decision Tree, Random Forest, and Neural Networks. *Advances in Fuzzy Systems*.
23. Awoin, E., **Appiahene, P.**, Gyasi, F., & Sabtiwu, A. (2020). Predicting the Performance of Rural Banks in Ghana Using Machine Learning Approach. *Advances in Fuzzy Systems*, 2020.
24. Iddrisu, W. A., **Appiahene, P.**, & Kessie, J. A. (2020). Effects of weather and policy intervention on COVID-19 infection in Ghana. *ArXiv*, 2005.00106. <http://arxiv.org/abs/2005.00106>
25. **Appiahene, P.**, & Missah, Y. M (2019). Predicting the Operational Efficiency of Banks in the presence of Information Technology Investment. *International Journal of Advances in Electronics and Computer Science*, 6(11), 1–6.
26. Philip Sarfo-Manu, Gifty Siaw, **Peter Appiahene** (2019). Intelligent System for Credit Risk Management in Financial Institutions. *International Journal of Artificial Intelligence and Machine Learning (IJAIML)* 9(2), DOI: 10.4018/IJAIML.2019070104.
27. **Appiahene, P.**, Missah, Y. M., & Najim, U. (2019). Evaluation of information technology impact on Bank's performance : The Ghanaian experience. *International Journal of Engineering Business Management*, 11, 1–10. <https://doi.org/10.1177/1847979019835337>
28. **Appiahene, P.**, Ussiph, N., & Missah, Y. M. (2018). Information Technology Impact on Productivity : A Systematic Review and Meta- Analysis of the Literature. *International Journal of Information Communication Technologies and Human Development*, 10(3). <https://doi.org/10.4018/IJICTHD.2018070104>.
29. Antwi, M., **Appiahene, P.**, & Boakye-ansah, Y. . (2017). Promoting Afforestation for Sustainable Communities through Gamification. *Journal of Energy and Natural Resource Management*, 1(ICCCSDA 2017 Special Issue), 43–49.

30. **Appiahene, P.**, and M. Antwi. "Application of GIS to create social media awareness to the effects of illegal mining on natural resources in the Tano North District of Ghana." Journal of Energy and Natural Resource Management (JENRM) (2018).
31. **Peter Appiahene**, Bryce Yaw Kesse and Christopher Bombie Ninfaakang. Article: Cloud Computing Technology Model for Teaching and Learning of ICT. International Journal of Computer Applications (0975-8887) Volume 143-No.5 June 2016. Published by Foundation of Computer Science, New York, USA.
32. **Appiahene Peter**, Appiah Obed and Adekoya Adebayo Felix, "Users Satisfaction of Ubuntu Operating System". Asian Journal of Mathematics and Computer Research 12(1): 54-62, 2016 ISSN: 2395-4205 (P), ISSN: 2395-4213 (O) International Knowledge Press, April 2016
33. **Appiahene Peter**, Boateng Frank Laud, Floyd-Hockman Anthony, Onworna-Agyeman Anthony Lord and Opoku Michael," Using Information and Communication Technology (ICT) to Predict Teachers Productivity". International Journal of Innovation and Scientific Research, Vol. 2, No.2, pp. 348-355, June. 2014.
34. **Peter Appiahene**, Opoku Michael and Alorwu D. K. Daniel. Article: Usage of Tonaton.Com by Buyers and Sellers: A Survey of Car Dealers in Kumasi Metropolis. International Journal of Computer Applications 96(14):6-10, June 2014. Published by Foundation of Computer Science, New York, USA.
35. **Appiahene Peter**, Opoku Michael, Akweitley Emmanuel, Adoba Emmanuel, and Kwarteng Richard," Assessing the Challenges of Teaching and Learning of Mathematics in Second Cycle Institutions in Ghana". International Journal of Innovation and Applied Studies, Vol. 6 No. 3, pp. 362-368, July 2014.

RESEARCH EXPERIENCE

1. **Part Time Research Assistant** | Department of Computer Science, Christian Service University College-Ghana *June 2014 - Sept 2014*

TEACHING EXPERIENCE

- A. **Senior Lecturer** | **University of Energy and Natural Resources, Department of Information Tech. and Decision Sciences** *August 2023-Date*
 1. Conducting Research and presenting at Conferences and Seminar
 2. Developing and maintaining a safe and confidential relationship with students
 3. Provide advice and support to students in matters related to academic work and student's personal development.
 4. Maintaining effective communication with other support services on behalf of students.
 5. Lecturing students in courses in undergraduate and postgraduate programs assigned to me by my Head of Department

6. Supervising students' Thesis.
7. Perform other duties assigned to me by my superiors.
8. Setting up of exams questions and marking of papers.
9. Actively leading class discussions and encouraging debate.

B. Senior Lecturer | University of Energy and Natural Resources, Department of Computer Science and Informatics

Oct 2020-July 2023

10. Conducting Research and presenting at Conferences and Seminar
11. Developing and maintaining a safe and confidential relationship with students
12. Provide advice and support to students in matters related to academic work and student's personal development.
13. Maintaining effective communication with other support services on behalf of students.
14. Lecturing students in courses in undergraduate and postgraduate programs assigned to me by my Head of Department
15. Supervising students' Thesis.
16. Perform other duties assigned to me by my superiors.
17. Setting up of exams questions and marking of papers.
18. Actively leading class discussions and encouraging debate.

C. Lecturer | University of Energy and Natural Resources,-Dept. of Computer Science and Informatics

Oct 2016- Sep 2020

1. Conducting Research and presenting at Conferences and Seminar
2. Developing and maintaining a safe and confidential relationship with students
3. Provide advice and support to students in matters related to academic work and student's personal development.
4. Maintaining effective communication with other support services on behalf of students.
5. Lecturing students in courses in undergraduate and postgraduate programs assigned to me by my Head of Department
6. Supervising students' Thesis.
7. Perform other duties assigned to me by my superiors.
8. Setting up of exams questions and marking of papers.
9. Actively leading class discussions and encouraging debate

D. Assistant Lecturer | University of Energy and Natural Resources,- Dept. of Computer Science and Informatics

1. Conducting Research and presenting at Conferences and Seminar
2. Developing and maintaining a safe and confidential relationship with students
3. Provide advice and support to students in matters related to academic work and student's personal development.
4. Maintaining effective communication with other support services on behalf of students.
5. Lecturing students in courses in undergraduate and postgraduate programs assigned to me by my Head of Department
6. Supervising students' Thesis.
7. Perform other duties assigned to me by my superiors.
8. Setting up of exams questions and marking of papers.
9. Actively leading class discussions and encouraging debate

E. Graduate Teaching | University of Energy and Natural Resources,- Department of Computer Science and Informatics

Feb 2021 -Date

1. Teach face-to-face and Online
2. Designed course curriculum, organized class lectures, and supervise Thesis

F. ICT and Mathematics Tutor | Barekese Senior High School Ashanti

Sep 2010 – Sep 2014

G. Mathematics Tutor | Pokuase Basic School, Pokuase near Mankraso National Service

Sep 2009 –Aug 2010

LEADERSHIP EXPERIENCE

H. Head/Chair of Department | Dept. of Information Technology and Decision Sciences at University of Energy

Aug 2023 –Date

1. Responsible to the Vice-Chancellor through the Dean for the general administration of the Department in respect of human, financial and material resources of the Department within the general framework of University policy;
2. Provide leadership, maintain and promote efficiency and good order in the Department in accordance with the policies and procedures of the University;
3. Organize the approved teaching and research programmes of the Department and encourage the carrying out of research;
4. Maintain acceptable standards of teaching and any other academic work;
5. Lead the introduction of innovative and demand-driven academic programmes;

6. Ensure effective assessment of student performance;
7. Ensure student assessment of course content and teaching;
8. Liaise with the Dean of the school in matters affecting the Department;
9. Be responsible for recommending to the School Board the development of syllabuses and courses in consultation with members of the Department
10. Make recommendations for the appointment and promotion of staff;
11. Advance and promote generally the well-being of the Department and persons engaged in the Department;
12. Maintain discipline in the Department subject to the Statutes;
13. Liaise with other departments, professional institutions, associations and similar bodies on academic and other matters affecting the Department

I. Head/Chair of Department | Dept. of Computer Science and Informatics at University of Energy
Aug 2021 –July 2023

14. Responsible to the Vice-Chancellor through the Dean for the general administration of the Department in respect of human, financial and material resources of the Department within the general framework of University policy;
15. Provide leadership, maintain and promote efficiency and good order in the Department in accordance with the policies and procedures of the University;
16. Organize the approved teaching and research programmes of the Department and encourage the carrying out of research;
17. Maintain acceptable standards of teaching and any other academic work;
18. Lead the introduction of innovative and demand-driven academic programmes;
19. Ensure effective assessment of student performance;
20. Ensure student assessment of course content and teaching;
21. Liaise with the Dean of the school in matters affecting the Department;
22. Be responsible for recommending to the School Board the development of syllabuses and courses in consultation with members of the Department
23. Make recommendations for the appointment and promotion of staff;

24. Advance and promote generally the well-being of the Department and persons engaged in the Department;
25. Maintain discipline in the Department subject to the Statutes;
26. Liaise with other departments, professional institutions, associations and similar bodies on academic and other matters affecting the Department
27. Developed MOUs between the department and other institutions namely CODETRAIN, COLDSIS, Kofi Annan International Peace Keeping Training Centre for running short professional engineering courses.
28. Huawei Academy Initiative with Department of Computer Science and Informatics
29. Robotics and Cyber Security Training.
30. Lead a team to train Military officers of the 3BN in the Sunyani on Drone Piloting.

LIST OF POSTGRADUATE COURSES TAUGHT

1. Machine Learning
2. Artificial Intelligence
3. Data Communication and Computer Networks
4. Data Structures Algorithms and Theory
5. Data Science
6. AR/VR
7. Graphics and Visualization
8. Comparative study of Programming Languages
9. Big Data Analytics and Business Intelligence
10. Database Management Systems
11. Quantitative and Qualitative Methods in Computer Science
12. Information Technology Policy, Advocacy and Community Engagement

LIST OF UNDERGRADUATE COURSES TAUGHT

1. Information Systems
2. Computer Networks and Security
3. Programming with C++
4. Artificial Intelligence
5. Mobile Application Development
6. Programming with C
7. Data Science Applications using Python.
8. Software Engineering
9. Management Information System
10. Cybersecurity
11. Programming with Java
12. Programming with C#,
13. Programming with VB.Net
14. Computer Operating Systems
15. Computer Organisation and Architecture
16. Cloud Computing

CONFERENCES/WORKSHOPS/SEMINARS

1. 6th Digital Belt and Road Conference, China
2. International Conference on Artificial Intelligence and Soft Computing (ICAISC) Munich, Germany 3rd - 4th July 2019.
3. 2019 4th GEO Data Technology Conference, Vienna-Austria.
4. IEEE 2019 International Conference on Communications, Signal Processing and Networks (ICCSPN), Cape Coast, Ghana.
5. 11th European Conference on Game Based Learning (ECGBL October, 2017) in Graz, Austria.
6. 5th International Conference on Applied Sciences and Technology (ICAST) held on September 2018 in Kumasi, Ghana.
7. International Conference on Climate Change and Sustainable Development in Africa (ICCCSDA) July 2017 Sunyani-Ghana.
8. 2016 Conference on Teaching Large Classes Virginia Tech, Virginia USA.
9. Workshop on "Good Assessment Practices in Higher Education" which took place from 16th - 17th January, 2019 at the Sheila's Executive Lodge-Sunyani, Ghana.
10. UENR-ACU Professional Development Seminar at UENR-Sunyani Ghana February 2019
11. 2nd AfriGEOSS Symposium at Sunyani Ghana June 2017.
12. AfriGEOSS ESA Sentinel training at University of Energy and Natural Resources-Ghana June 2017.
13. Supporting EU-African Cooperation on Research Infrastructures for Food Security and Greenhouse Gas Observations (SEACRIFOG) Project Stakeholder Consultation Workshop, Sunyani Ghana June 2017.
14. Workshop on Oracle Java Programming at University of Ghana, Legon.

CONFERENCE PROCEEDINGS

1. Predicting the Operational Efficiency of Banks in the Presence of Information Technology Investment Using Artificial Neural Network. Presented at the International Conference on Artificial Intelligence and Soft Computing (ICAISC) Munich, Germany 3rd - 4th July 2019
2. Improving Satellite Images Resolutions using Generative Adversarial Network. Presented 2019 4th GEO Data Technology Conference, Vienna-Austria
3. Appiahene, P., & Missah, Y. M. (2020). Bank Classification Algorithm: Case Study of Ghanaian Banks. IEEE 2019 International Conference on Communications, Signal Processing and Networks (ICCSPN), 1-6. <https://doi.org/10.1109/iccspn46366.2019.9150171>.
4. Levitation of Language Studies Using Appiahene Gamification Model 5th International Conference on Applied Sciences and Technology (ICAST) held on September 2018 in Kumasi, Ghana.

5. Promoting Education in rural Ghana through the use of wireless ad-hoc network. 5th International Conference on Applied Sciences and Technology (ICAST) held on September 2018 in Kumasi, Ghana.
6. Literature Review on IT impact on Organizational Productivity. 5th International Conference on Applied Sciences and Technology (ICAST) held on September 2018 in Kumasi, Ghana.
7. Raising Students Programming Skills Using Appiahene Gamification Model. Presented at the 11th European Conference on Game Based Learning (ECGBL October, 2017) in Graz, Austria.
8. Promoting Afforestation for Sustainable Communities Using Gamification. International Conference on Climate Change and Sustainable Development in Africa (ICCCSDA) July 2017 Sunyani-Ghana.
9. The role of ICT in the management of natural Resources. Case study of applying GIS and Social Media in the fight against illegal mining in Ghana. International Conference on Climate Change and Sustainable Development in Africa (ICCCSDA) July 2017 Sunyani-Ghana.
10. "Design and Implementation of Online-Learning platform with a large class size. Case study at University of Energy and Natural Resources-Ghana". 2016 Conference on Teaching Large Classes Virginia Tech, Virginia USA.

OTHER PUBLICATIONS

COVID-19 Pandemic and the Ghanaian Information Technology (IT) Industry. Published by Modern Ghana Online News Portal. <https://www.modernghana.com/news/999605/covid-19-pandemic-and-the-ghanaian-information.html>

GRANTS AND AWARDS WON

1. Member of team that won funds (5000\$) in 2019 to work on a project founded by Skills Development Fund (SDF2) to upscale the Advanced Fire Information System (AFIS) project by providing farmers and other stakeholders with early fire detection and alert information in the form of voice and SMS alerts as well as smartphone application.

EXTENSION ACTIVITIES TO NATIONAL (GHANA) AND INTERNATIONAL COMMUNITY

1. Facilitator for ICT training for the 3rd Infantry Battalion, Sunyani March 2021
2. Consultant and Panel Member for JoyNews PM Express Television Programme. May 2020
3. Speaker Forum on Digital Inclusion in the Time of Covid-19 organized by Alliance for Affordable Internet. May 2020
4. Consultant and Mentor for CodeTrain, Ghana. January 2015-Date
5. Consultant and Panel Member for GrassRoots Hub, Ghana. June 2020

6. Facilitator/ Independent Assessor for Global Polio Eradication Initiative. February 2020
7. Speaker for the International Conference on Climate Change and Sustainable Development in Africa (ICCCSA 2017) July 2017
8. Consultant for SDF II Project at UENR January 2019-Date
9. Group Member Ghana Infrastructure Sharing and Open Access Working Group of Alliance for Affordable Internet. 2017-Date

EXTENSION ACTIVITIES TO INTERNATIONAL SCIENTIFIC COMMUNITY

1. Reviewer, Journal of Supercomputing
2. Reviewer, Expert Systems
3. Reviewer from Journal of Computer Science
4. Reviewer for the 8th International Workshop on Mobile Applications 2022 in Rome, Italy
5. Speaker for the 5th International Conference on Applied Sciences and Technology (ICAST 2018) September 2018
6. Speaker for the 11th European Conference on Game Based Learning (ECGBL 2017) October 2017
7. Technical program committee member for 2019 2nd International Conference on Computer Applications and Information Security ICCAIS'19 Riyadh, Saudi Arabia. September 2018
8. Designated Reviewer on the Editorial committee for the Inter Journal for Computing and Digital Systems (IJCDS). February 2020
9. Technical program committee for the IAES International Journal of Artificial Intelligence. March 2020
10. Designated Reviewer ICCISN' 2018: International Conference on Computer Intelligent Systems & Networking Sousse, Tunisia, January 3-5, 2018
11. Technical program committee member for WSCAR 2017 (2017 World Symposium on Computer Applications & Research) Istanbul, Turkey
12. Technical program committee Member GSCIT 2016 (2016 Global Summit on Computer & Information Technology), Tunisia.
13. Technical program committee Member for ICARCAD 2016 (2016 International conference on Architectural Research & Computer-Aided Design), Italy.
14. Technical program committee Member for 2015 International Conference on Single Processing & Data Mining, (ICSDM'15), 05-07 November, 2015 Rome Italy.
15. Technical program committee member for the 4th International Conference on advances in Computing, Communications and Informatics(ICACCI),10-13 August,2015 Kerala, India.

16. Editorial Board Member, Seventh Sense Research Group Journals.
17. Reviewer for the 6th International Workshop on Mobile Applications 2019 (MobiApps 2019)
18. Reviewer for the Smart Cities Symposium 2019 (SCS'19).
19. Reviewer for 2019 8th International Conference on Modeling, Simulation, and Applied Optimization (ICMSAO) (ICMSAO'19).

SERVICE TO THE UNIVERSITY

1. Member of the University of Energy and Natural Resources Governing Council
2. Member University Information Technology Committee
3. Chairman Ebiz Frame Software Review Committee
4. Chairman University Housing and Residence Policy Drafting Committee
5. Member University Housing and Residence Committee
6. Member, University Academic Board
7. Chief Invigilator Second Semester
8. Departmental Exams Officer
9. Departmental Research and Seminar Coordinator
10. Member University Housing and Residence Committee
11. Member School of Sciences Undergraduate Project Committee
12. Member School of Sciences Seminar Committee
13. Member School of Sciences Welfare Committee
14. Departmental Research and Seminar Coordinator
15. Academic Tutor, Department of Computer Science and Informatics

EXTERNAL AND INTERNAL THESIS EXAMINATIONS

1. Served as an External Examiner for the Department of Computer Engineering, KNUST-Kumasi.
2. Served as an External Examiner for the School of Technology at Ghana Institute Management and Public Administration Accra-Ghana from 2021 to present.
3. Serve as Internal Examiner at the Graduate Level (PhD and Master's Thesis) examination for the department of Computer Science and Informatics, UENR-Sunyani 2021 to present.

POSTGRADUATE THESIS EXAMINATION FROM 2021 TO DATE

1. External Examiner for 1 PhD thesis and 1 MPhil thesis from KNUST-Kumasi.
2. Examined 2 PhD thesis from the Department of Computer Science and Informatics, UENR-Sunyani
3. Examined 2 MPhil thesis from the Department of Computer Science and Informatics, UENR-Sunyani

4. Examined 4 MSc. thesis from the Department of Computer Science and Informatics, UENR-Sunyani
5. Examined 5 MSc thesis from the School of Technology at Ghana Institute Management and Public Administration Accra-Ghana

GRADUATE STUDENTS SUPERVISION

PhD Thesis and Project

1. Principal supervisor for 1 PhD Candidate of the Computer Science and Informatics Department, UENR.
Mr. Paul Aazagreyir: An Integrated Fuzzy Multi-Criteria Decision Making Methods for QOS Factors-Based Service Selection and Rank Reversal Problem Investigations. **Ongoing**
2. Co- supervisor for 1 PhD Candidate of the Computer Science and Informatics Department, UENR.
Mrs. Vivian Akoto-Adjepong: Performance Enhancement of Capsule Neural Networks on Complex images with Applications in Medical Image Diagnosis. **Ongoing**

MPhil Thesis and Project

3. Ayitey Michael Junior: Forex Market Forecasting With Two-Layer Stacked Long Short- Term Memory Neural Network (LSTM) and Correlation Analysis. **Completed**
4. Asare, Justice Williams: Detection of Iron Deficiency Anemia Using Medical Images: A Comparative Study of Machine Learning Algorithms. **Completed**
5. Samuel Kusi-Duah: Performance Evaluation of the Various Texture Feature Extraction Techniques for Medical Imagery Retrieval. **Completed**
6. Adu Kwasi Williams: Utilizing Residual Stacking and Google Trends for Forecasting Unemployment Rate. **Completed**
7. Zakaria, Ismail Mahamud: Public Health Analysis on Facebook Posts Using Natural Language Processing. **Completed**
8. Fordjour Andrews Kwadwo: An Interdisciplinary Model for Improving Machine Learning Algorithm Performance on Insider Data Theft Detection. **Completed**
9. Gyimah Kopri: Simulating the Thermal Performance of Solar Water Heater Using Machine Learning. **Completed**
10. Sarfo-Manu Philip Urine Strip Test image processing using Convolutional Neural Network with firefly optimizer. **Ongoing**
11. Emmanuel Botchway: Modelling the Relationship between Land Cover and land Surface Temperature: A Machine Learning Approach. **Ongoing**
12. Emmanuel Akwah Kyie: Facial Emotion Recognition Using an Optimized Convolutional Neural Network. **Ongoing**

MSc. Thesis and Project

13. Appiah Kwarteng: Systematic Review, Meta-Analysis and Applications of Flower Pollination Algorithm. **Completed**
14. Abdul Mumuni Yeskuru: Machine Learning in Fake News Detection: Systematic Review and Bibliometric Analysis. **Completed**

Undergraduate Project Supervision

1. Design and Implementation of an Employee Timesheet Management System
2. Rice Leaf Disease Detection Using Convolutional Neural Network
3. Impact Assessment of Climatic factors on Daily cases of Covid-19 using Machine Learning
4. Creating a School Management System Using UENR Basic as case study
5. Developing a Biometric Attendance System
6. Design and Implementation of Online Food Ordering System with GPS.
7. Effectiveness of Machine Learning in Land-Cover Classification
8. Using Artificial Neural network to predict Global Radiation
9. Predicting the performance of Rural Banks in Ghana Using Machine Learning Approach
10. Application for predicting Students' Final Cumulative Grade Point Average
11. Using Random Forest Algorithm to Predict Banks' Performance
12. Sales and Inventory Management System
13. Church Management System
14. Improving Sales of Poultry Products and Ensuring Effective Communication between Farmers and Agric Officers Using Mobile App.
15. Using Gamification as tool to create Diabetes Awareness.
16. Predicting the Outbreak of Malaria Using Machine Learning Algorithm.
17. Intelligent Systems for Credit Risk Management in Financial Institutions.
18. Online Hostel Management System.
19. Expert System for Climate Change and Adaptation Strategies.
20. Design and Implementation of an Online Hostel Allocation System.
21. The study of Spatial pattern Distribution of Mobile Money Centers.
22. Controlling and Managing Users Complaints and Request Using Helpdesk Management System.
23. Northern Electricity Distribution Company Online Complain Management System.
24. Online Entrance Examination Systems for Matured Applicants of UENR.

SOFTWARE DEVELOPED

1. Mobile App for Detecting Anaemia among Children using Conjunctival Images
2. Expert System for Climate Change and Adaptation Strategies
3. Mobile Money Centre Locator "Sika Kyere App"
4. Computer Science and Information Technology Students Association App , "CISTA App"
5. Northern Electricity Distribution Company Online Complain Management System

6. Online Entrance Examination Systems for Matured Applicants of UENR.
7. Intelligent Systems for Credit Risk Management in Financial Institutions
8. Design and Implementation of Online Food Ordering System with GPS.

CURRICULUM DEVELOPED AND REVIEWED

1. Chairman, PhD Information Technology, MPhil/MSc Information Technology
2. Chairman, PhD Management Information Systems, MPhil/MSc Management Information Systems
3. Member, PhD Computer Science, MPhil Computer Science and MSc. Computer Science
4. Member, Diploma Information Technology Program Review Committee at UENR.
5. Member, BSc Computer Science Program Review Committee.
6. Member, BSc. Information Technology Program Review Committee.
7. Member, Diploma Information Technology Program at UENR.
8. Member, Diploma Computer Science Program at UENR.

PROFESSIONAL DEVELOPMENT, TRAINING AND WORKSHOPS

1. A 4-day Grant proposal writing at Eusbett Hotel Sunyani Region, Ghana
2. Oracle Academy Training in Java Programming at University of Ghana, Legon.
3. A 2 day workshop on "Good Assessment Practices in Higher Education: Improving Teaching and Learning" held at Sheila's Executive Hotel, Sunyani –Ghana.

SKILLS AND CORE COMPETENCIES

1. Microsoft PowerBI,
2. Software Development (Programming Languages: Unity, Java, R, Python, Visual Basic.Net, C, and C++, C #Math Lab, Hugging Face & Pytorch).
3. Artificial Intelligence Tools (Tensorflow, MxNet, Keras, PyTorch)
4. Statistical Software (GraphPad Prism, Stata, R, Statistica, JMP, Stata, SAS and Minitab)
5. Excellent skills in Computing and Statistical tools (GraphPad Prism, Stata, R, Statistica, JMP, Stata, SAS, Minitab, SPSS, EPA Probit Analyses and GenSat,)
6. Latex and Microsoft Office

LANGUAGES SPOKEN

English and Twi

INTEREST AND HOBBIES

REFERENCES

1. Prof. Emmanuel Marfo-Owusu

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