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RESEARCH

Interests	Federated Search · ICT Education · Machine Learning · Artificial Intelligence · Education · Information Retrieval · Higher Education Management
Areas	Information Systems · Artificial Intelligence · Computer Vision and Pattern Recognition · Education · Organizational Behavior and Human Resource Management · Computational Mechanics

RESEARCH SUMMARY

57	536	9	8	2.46	22%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 57 publications listed below, 2014–2026. Field-weighted impact is the mean over the 45 works scored for it; 1.00 is the world average for works of the same field, type and year. 10 of the 45 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Associate Professor
ICT Education, University of Education, Winneba, Winneba, Ghana

PUBLICATIONS

Journal articles 46

1. Stephen Opoku Oppong, Daniel Danso Essel, **Benjamin Ghansah** (2026). Deep Learning-based Software Vulnerability Severity Prediction Using Natural Language Processing. *Asian Journal of Research in Computer Science*. https://www.researchgate.net/profile/Benjamin-Ghansah-2/publication/410782487_Deep_Learning-based_Software_Vulnerability_Severity_Prediction_Using_Natural_Language_Processing/links/6a6b66aca4d94b202f22c990/Deep-Learning-based-Software-Vulnerability-Severity-Prediction-Using-Natural-Language-Processing.pdf
2. Obeng Owusu-Boateng, **Benjamin Ghansah** (2026). Pre-Service Teachers' Perceptions of ICT and Their Interest in ICT Learning: Evidence from a College of Education in Ghana. https://doi.org/10.69739/jicte.v1i2.2186
3. Selorm Adablanu, **Benjamin Ghansah**, Ben-Bright Benuwa, Stephen Opoku Oppong (2025). A Thorough Review of AI Developments in Education: Historical Progress, Current Applications, and Future Directions. *Journal of Artificial Intelligence in Education*. https://doi.org/10.29303/jaie.v1i2.706
4. Stephen Kwashie Amemasor, Stephen Opoku Oppong, **Benjamin Ghansah**, Ben-Bright Benuwa, Daniel Danso Essel (2025). A systematic review on the impact of teacher professional development on digital instructional integration and teaching practices. *Frontiers in Education*. https://doi.org/10.3389/feduc.2025.1541031
5. **Benjamin Ghansah** (2025). Automating Cybersecurity: Leveraging Event Logs for Real-Time Security Insights and Proactive Defense. *International Journal of Computer Applications*. https://scholar.google.com/scholar?cluster=4322181593605752170&hl=en&oi=scholarr

6. **Benjamin Ghansah** (2025). From crisis to opportunity: the digital evolution of higher education in Africa amidst the COVID-19 pandemic. *Discover Education*. https://doi.org/10.1007/s44217-025-00527-1

7. **Benjamin Ghansah** (2025). International Journal of Risk and Contingency Management (IJRCM). *Benefits*. https://www.igi-global.com/journal/international-journal...management/53135

8. Emmanuel Kwasi Gyamfi, **Benjamin Ghansah**, Issifu Yidana, Stephen Opoku Oppong, Patricia Ananga, Einstein Kow Essibu, Winston Kwamina Essibu (2025). Preservice teacher trainees' preparedness and implementation of computing curriculum in Ghana. *Discover Education*. https://doi.org/10.1007/s44217-025-00451-4

9. Patricia Ananga, **Benjamin Ghansah**, John Kwame Boateng, Stephen Opoku Oppong (2025). Student Experiences of and Opportunities for Using Social Media for Learning in Two Urban Higher Education Institutions in Ghana. *Africa Education Review*. https://doi.org/10.1080/18146627.2025.2600430

10. Stephen Kwashie Amemasor, Stephen Opoku Oppong, **Benjamin Ghansah**, Ben-Bright Benuwa, Mathias Agbeko (2025). The influence of digital professional development and professional learning communities in the relationship between school digital preparedness and digital instructional integration. *PLoS ONE*. https://doi.org/10.1371/journal.pone.0328883

11. Godwin Elo, **Benjamin Ghansah**, Ephrem Kwaku Kwaa-Aidoo (2024). Critical Review of Stack Ensemble Classifier for the Prediction of Young Adults' Voting Patterns Based on Parents' Political Affiliations. *Informing Science The International Journal of an Emerging Transdiscipline*. https://doi.org/10.28945/5254

12. Isaac Baffour Senkyire, Kashala Kabe Gedeon, Emmanuel Freeman, **Benjamin Ghansah**, Zhe Liu (2024). EcD-Net: Encoder-Corollary Atrous Spatial Pyramid Pooling-decoder network for automated pancreas segmentation of 2D CT images. *Informatics in Medicine Unlocked*. https://doi.org/10.1016/j.imu.2024.101597

13. Kuuku Nyameye Wilson, **Benjamin Ghansah**, Patricia Ananga, Stephen Opoku Oppong, Winston Kwamina Essibu, Einstein Kow Essibu (2024). Exploring the efficacy of computer games as a pedagogical tool for teaching and learning programming: A systematic review. *Education and Information Technologies*. https://doi.org/10.1007/s10639-024-13005-2

14. **Benjamin Ghansah**, Ben-Bright Benuwa, Daniel Danso Essel, Andriana Pokuaa Sarkodie, Mathias Agbeko (2022). A Review of Non-Linear Kalman Filtering for Target Tracking. *International Journal of Data Analytics*. https://doi.org/10.4018/ijda.294864

15. **Benjamin Ghansah** (2022). Convolutional Locality-Sensitive Dictionary Learning for Facial Expressions Detection. *International Journal of Data Analytics*. https://doi.org/10.4018/ijda.297520

16. Stephen Opoku Oppong, **Benjamin Ghansah**, Evans Baidoo, Wilson Osafo Apeanti, Daniel Danso Essel (2022). Experimental Study of Swarm Migration Algorithms on Stochastic and Global Optimisation Problem. *International Journal of Distributed Artificial Intelligence*. https://doi.org/10.4018/ijdai.296389

17. **Benjamin Ghansah**, Ben-Bright Benuwa (2022). Impact of Technology on University Leadership Effectiveness Among Academic Staff of Some Selected Private Universities in Ghana. *International Journal of ICT Research in Africa and the Middle East*. https://doi.org/10.4018/ijictrame.290834

18. **Benjamin Ghansah** (2022). The Impact of Cyber Bullying on the Youth: The Ghanaian Perspective. *International Journal of Computer Applications*. https://doi.org/10.5120/ijca2022921889

19. **Benjamin Ghansah**, Ben-Bright Benuwa, Augustine Monney (2021). A Discriminative Locality-Sensitive Dictionary Learning With Kernel Weighted KNN Classification for Video Semantic Concepts Analysis. *International Journal of Intelligent Information Technologies*. https://doi.org/10.4018/ijiit.2021010105

20. Ben-Bright Benuwa, **Benjamin Ghansah** (2021). Locality-Sensitive Non-Linear Kalman Filter for Target Tracking. *International Journal of Distributed Artificial Intelligence*. https://doi.org/10.4018/ijdai.2021010102

21. Daniel Danso Essel, Ben-Bright Benuwa, **Benjamin Ghansah** (2021). Video Semantic Analysis. *International Journal of Computer Vision and Image Processing*. https://doi.org/10.4018/ijcvip.2021040101

22. DD Essel, BB Benuwa, **Benjamin Ghansah** (2021). Video semantic analysis: the sparsity based locality-sensitive discriminative dictionary learning factor. *International Journal of Computer Vision and Image Processing (IJCVIP)*. https://www.igi-global.com/article/video-semantic-analysis/275815

23. Ben-Bright Benuwa, **Benjamin Ghansah**, Ernest K. Ansah (2020). Deep locality-sensitive discriminative dictionary learning for semantic video analysis. *Software Practice and Experience*. https://doi.org/10.1002/spe.2783

24. Serwaa Serwaa Andoh, **Benjamin Ghansah**, Joy Nana Okogun-Odompley, Ben-Bright Benuwa (2020). The Effect of Job Satisfaction on Turnover Intentions. *International Journal of Risk and Contingency Management*. https://doi.org/10.4018/ijrcm.2021010103

25. Juliana Serwaa Andoh, **Benjamin Ghansah** (2019). A Study of Leadership Style on Employees' Performance in some Selected Private Universities in Ghana. *International journal of engineering research in Africa*. https://doi.org/10.4028/www.scientific.net/jera.43.157

26. Juliana Serwaa Andoh, **Benjamin Ghansah**, Joy Nana Okogun-Odompley, Ben-Bright Benuwa (2019). Impact of Workplace Diversity on Employee Performance. *International Journal of R&D Innovation Strategy*. https://doi.org/10.4018/ijrdis.2019070103

27. Ben-Bright Benuwa, **Benjamin Ghansah**, Ernest K. Ansah (2019). Kernel based locality – Sensitive discriminative sparse representation for face recognition. *Scientific African*. https://doi.org/10.1016/j.sciaf.2019.e00249

28. **Benjamin Ghansah**, Juliana Serwaa Andoh, Patrick Gbagonah, Joy Nana Okogun-Odompley (2019). The Determinant of Student Satisfaction in Academic and Administrative Services in Private Universities. *International Journal of Applied Management Sciences and Engineering*. https://doi.org/10.4018/ijamse.2019070104

29. Pokuaa Andriana Sarkodie, Zhen Kai Zhang, Ben Bright Benuwa, **Benjamin Ghansah**, Ernest Ansah (2018). A Survey of Advanced Marine Communication and Navigation Technologies: Developments and Strategies. *International journal of engineering research in Africa*. https://doi.org/10.4028/www.scientific.net/jera.34.102

30. Ben-Bright Benuwa, Yongzhao Zhan, JunQi Liu, Jianping Gou, **Benjamin Ghansah**, Ernest K. Ansah (2018). Group sparse based locality – sensitive dictionary learning for video semantic analysis. *Multimedia Tools and Applications*. https://doi.org/10.1007/s11042-018-6417-3

31. Ben-Bright Benuwa, Yongzhao Zhan, **Benjamin Ghansah**, Ernest K. Ansah, Andriana Sarkodie (2018). Sparsity Based Locality-Sensitive Discriminative Dictionary Learning for Video Semantic Analysis. *Mathematical Problems in Engineering*. Retracted. https://doi.org/10.1155/2018/9312563

32. Ben-Bright Benuwa, Yongzhao Zhan, Augustine Monney, **Benjamin Ghansah**, Ernest K. Ansah (2018). Video semantic analysis based kernel locality-sensitive discriminative sparse representation. *Expert Systems with Applications*. https://doi.org/10.1016/j.eswa.2018.11.016

33. Emmanuel Opoku Marfo, Kwame Oduro Amoako, Henry Asante Antwi, **Benjamin Ghansah**, Gausu Mohammed Baba (2017). Corporate Social Responsibility: Institutional Behavior Differences in Extractive Industry. *International journal of engineering research in Africa*. https://doi.org/10.4028/www.scientific.net/jera.33.194

34. Ben Bright Benuwa, **Benjamin Ghansah**, Dickson Keddy Wornyo, Sefakor Awurama Adabunu (2016). A Comprehensive Review of Particle Swarm Optimization. *International journal of engineering research in Africa*. https://doi.org/10.4028/www.scientific.net/jera.23.141

35. **Benjamin Ghansah**, Shengli Wu (2016). A Mean-Variance Analysis Based Approach for Search Result Diversification in Federated Search. *International Journal of Uncertainty Fuzziness and Knowledge-Based Systems*. https://doi.org/10.1142/s0218488516500100

36. BB Benuwa, **Benjamin Ghansah** (2016). A review of deep machine learning. *International Journal of Engineering Research in Africa*. https://www.scientific.net/jera.24.124

37. **Benjamin Ghansah**, Ben Bright Benuwa, Ernest Kwame Ansah, Nathaniel Ekow Ghansah, Cwebile Magama, Elias Nii Noye Ocquaye (2016). Factors that Influence Students' Decision to Choose a Particular University: A Conjoint Analysis. *International journal of engineering research in Africa*. https://doi.org/10.4028/www.scientific.net/jera.27.147

38. Ben-Bright Benuwa, **Benjamin Ghansah**, Dickson Keddy (2016). Review of Complex Networks. *International Journal of Computer Applications*. https://doi.org/10.5120/ijca2016909624

39. **Benjamin Ghansah** (2016). The antecedents of corporate social responsibility for extractive industries in the governance systems in Africa. *International Journal of Engineering Research in Africa*. https://www.scientific.net/JERA.24.181

40. **Benjamin Ghansah**, Sheng Li Wu (2015). Distributed Information Retrieval: Developments and Strategies. *International journal of engineering research in Africa*. https://doi.org/10.4028/www.scientific.net/jera.16.110

41. **Benjamin Ghansah**, BB Benuwa (2015). Impact of Pet Bottles Disposal and Management Mechanisms in Selected Urban Cities in Ghana. *Journal of Multidisciplinary Engineering Science and Technology*. https://www.academia.edu/download/105097595/IMPACT_20OF_20PET_20BOTTLES_20DISPOSALS_20AND_20MANAGEMENT_20MECHANISMS_20IN_20SELECTED_20URBAN_20CITIES_20OF_20GHANA.pdf

42. **Benjamin Ghansah**, Sheng Li Wu, Nathaniel Ekow Ghansah (2015). Improving Results Aggregation Strategies in Distributed Information Retrieval. *International journal of engineering research in Africa*. https://doi.org/10.4028/www.scientific.net/jera.17.94

43. Wei Min Ding, **Benjamin Ghansah**, Yan Yan Wu (2015). Research on the Virtualization Technology in Cloud Computing Environment. *International journal of engineering research in Africa*. https://doi.org/10.4028/www.scientific.net/jera.21.191

44. **BENJAMIN Ghansah** (2015). Survey On Score Normalization: A Case Of Result Merging In Distributed Information Retrieval. *WSEAS Transactions on Information Science and Applications*. https://www.academia.edu/download/39634306/new.pdf

45. Nathaniel Ekow Ghansah, **Benjamin Ghansah**, Ben Bright Benuwa, Elias Nii Noye Ocquaye (2015). Using Social Media as a Marketing Tool in Tertiary Institutions: A Case Study of Data Link University, Ghana. *International journal of engineering research in Africa*. https://doi.org/10.4028/www.scientific.net/jera.20.218

46. **B Ghansah**, BB Benuwa (2014). Fingerprint Based Approach for Resource Selection in Federated Research. *International Journal of Advanced Research in Computer Science & Technology (IJARCST)*. https://www.academia.edu/download/81318759/benjamin.pdf

Books 1

1. Abazaami Joseph, **Benjamin Ghansah**, Obeng Owusu-Boateng (2026). Foundations of ICT for Agribusiness: Digital Tools, Technologies and Transformations in Modern Agriculture. https://doi.org/10.70593/978-81-6632-014-9

Book chapters 4

1. **Benjamin Ghansah** (2025). Enhanced Retinopathy Detection Using Nested U-Net for Red Lesion Segmentation in Retinal Fundus Images. *Advances in Healthcare Using Machine Learning*. https://doi.org/10.1201/9781003716686-5

2. Ebenezer Gaisie, Obeng Owusu-Boateng, Issifu Yidana, **Benjamin Ghansah** (2025). Ethical considerations and data privacy in artificial intelligence. https://doi.org/10.70593/978-93-49307-53-7_5

3. Juliana Serwaa Andoh, **Benjamin Ghansah**, Joy Nana Okogun-Odompley, Ben-Bright Benuwa (2021). Impact of Workplace Diversity on Employee Performance. *IGI Global eBooks*. https://doi.org/10.4018/978-1-6684-2405-6.ch054

4. **Benjamin Ghansah**, Juliana Serwaa Andoh, Patrick Gbagonah, Joy Nana Okogun-Odompley (2020). The Determinant of Student Satisfaction in Academic and Administrative Services in Private Universities. *IGI Global eBooks*. https://doi.org/10.4018/978-1-7998-3438-0.ch068

Conference papers 5

1. **Benjamin Ghansah** (2025). Predicting Student Engagement and Academic Performance in Digital Learning Environments Using Machine Learning Models: A Case Study of the University of Education, Winneba. *ITK – Interaktiivinen Tekniikka Koulutuksessa 2025*. https://www.researchgate.net/profile/Benjamin-Ghansah-2/publication/390874124_Predicting_Student_Engagement_and_Academic_Performance_in_Digital_Learning_Environments_Using_Machine_Learning_Models_A_Case_Study_of_the_University_of_Education_Winneba/links/6800f9a6df0e3f544f4281af/Predicting-Student-Engagement-and-Academic-

Performance-in-Digital-Learning-Environments-Using-Machine-Learning-Models-A-Case-Study-of-the-University-of-Education-Winneba.pdf

2. Stephen Opoku Oppong, **Benjamin Ghansah**, Christopher Yarkwah, Einstein Kow Essibu, Winston Kwamina Essibu (2025). Predicting Students Academic Performance Based on Self-cognitive Factors Using Machine Learning Algorithms. *Lecture notes in networks and systems*. https://doi.org/10.1007/978-981-96-6929-5_11
3. Eric Korku Agbemafle, Ben-Bright Benuwa, **Benjamin Ghansah**, Stephen Opoku Oppong, Kojo Agyekum Asiama (2024). Enhanced Technology Acceptance Model for Evaluating Adoption of Cloud Computing in Colleges of Education in Ghana. https://doi.org/10.1109/smartblock4africa61928.2024.10779531
4. Edward Peter Greenwood White, Jussi Okkonen, Reeta Oksa, **Benjamin Ghansah**, Christopher Yarkwah, Ephrem Kwaa-Aidoo, Issifu Yidana, Wilson Osafo Apeanti, Rosemary Twum (2023). Approaches to leveraging digital higher education in Africa. *Proceedings of the 6th ACM SIGCAS/SIGCHI Conference on Computing and Sustainable Societies*. https://doi.org/10.1145/3588001.3609380
5. **Benjamin Ghansah**, Shengli Wu, Nathaniel Ghansah (2015). Rankboost-Based Result Merging. https://doi.org/10.1109/cit/iucc/dasc/picom.2015.136

Theses 1

1. **BENJAMIN Ghansah** (2015). Improving Resource Selection and Result Merging in an Uncooperative Search Environment. *Ph. D. Thesis, Jiangsu University, Zhenjiang*. https://scholar.google.com/scholar?cluster=10147628522977335 62&hl=en&oi=scholarr