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RESEARCH

Interests	Biometrics · security · artificial intelligence · database · cloud computing
Areas	Artificial Intelligence · Computer Vision and Pattern Recognition · Information Systems · Computer Networks and Communications · Signal Processing · Electrical and Electronic Engineering

RESEARCH SUMMARY

110	1,288	16	26	1.61	16%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 110 publications listed below, 2001–2026. Field-weighted impact is the mean over the 56 works scored for it; 1.00 is the world average for works of the same field, type and year. 9 of the 56 papers scored for it are among the world's most cited tenth for their field, type and year.

PUBLICATIONS

Journal articles 97

1. Rose-Mary Owusuaa Mensah Gyening, **James Ben Hayfron-Acquah**, Michael Asante, Kate Takyi, Peter Appiahene (2026). Deep-fuzzy personalisation framework for robot-assisted learning for children with autism. *Indonesian Journal of Electrical Engineering and Computer Science*. https://doi.org/10.11591/ijeecs.v41.i1.pp320-330
2. Daniel Opoku, Kwabena Owusu-Agyemang, **James Benjamin Hayfron-Acquah**, Rose-Mary Owusuaa Mensah Gyening (2026). SwinCNN+OE: A Swin Transformer and CNN Architecture for Breast Histopathology Classification With OOD and Grad-CAM Integration. *IEEE Access*. https://doi.org/10.1109/access.2026.3650834
3. Michael Owusu-Adjei, **James Ben Hayfron-Acquah**, Twum Frimpong, Abdul-Salaam Gaddafi (2025). An AI-based approach to predict delivery outcome based on measurable factors of pregnant mothers. *PLOS Digital Health*. https://doi.org/10.1371/journal.pdig.0000543
4. Mavis Sarah Gyimah, **James Benjamin Hayfron -Acquah**, Rose-Mary Mensah Gyening, Michael Asante, Umar Farouk Ibn Abdulrahman, Evans Kotei (2025). AsanteTwiSenti: A Sentiment dataset of Ghanaian Asante Twi Tweets in a multilingual context. *Data in Brief*. https://doi.org/10.1016/j.dib.2025.111460
5. Eliezer Ofori Odei-Lartey, Stephaney Gyaase, Solomon Nyame, Dominic Asamoah, Kwaku Poku Asante, **James Ben Hayfron-Acquah** (2025). Feature representation in analysing childhood vaccination defaulter risk predictors: A scoping review of studies in low-resource settings. *PLOS Digital Health*. https://doi.org/10.1371/journal.pdig.0000965
6. Nicodemus Songose Awarayi, Frimpong Twum, **James Ben Hayfron-Acquah**, Kwabena Owusu-Agyemang (2024). A Neural Architecture Search CNN for Alzheimer's Disease Classification. *ECTI Transactions on Computer and Information Technology (ECTI-CIT)*. https://doi.org/10.37936/ecti-cit.2024184.255728
7. Augustina Dede Agor, Michael Asante, **James Benjamin Hayfron-Acquah**, James Tetteh Ami-Narh, Lawrence Kwami Aziale, Kwame Ofosuhene Peasah (2024). A Power-Aware River Formation Dynamics Routing Algorithm for Enhanced Longevity in MANETs. *International Journal of Computer Networks And Applications*. https://doi.org/10.22247/ijcna/2024/17

8. Nicodemus Songose Awarayi, Frimpong Twum, **James Ben Hayfron-Acquah**, Kwabena Owusu-Agyemang (2024). A bilateral filtering-based image enhancement for Alzheimer disease classification using CNN. *PLoS ONE*. https://doi.org/10.1371/journal.pone.0302358

9. F Twum, **JB Hayfron-Acquah** (2024). Compression, and Genetic Algorithm. *Proceedings of Ninth International Congress on Information and Communication Technology: ICICT 2024, London, Volume 10*. https://books.google.com/books?hl=en&lr=&id=I6Q4EQAAQBAJ&oi=fnd&pg=PA307&dq=info:i2kaUmWg2KEJ:scholar.google.com&ots=ChLZFgaxA-&sig=oXVO7uyup6kGFDtbvqOdrmtJLzE

10. John Kwao Dawson, Frimpong Twum, **James Benjamin Hayfron Acquah**, Yaw Marfo Missah (2024). Cryptographic Solutions for Data Security in Cloud Computing:. *Journal of Cyber Security and Mobility*. https://doi.org/10.13052/jcsm2245-1439.1324

11. Richard Apau, Michael Asante, Frimpong Twum, **James Ben Hayfron-Acquah**, Kwame Ofosuhene Peasah (2024). Image steganography techniques for resisting statistical steganalysis attacks: A systematic literature review. *PLoS ONE*. https://doi.org/10.1371/journal.pone.0308807

12. **JB Hayfron-Acquah**, KO Peasah (2024). Mobile ad-hoc networks: A classification system for routing protocols. *Int. J. Commun. Netw. Inf. Secur*. https://www.researchgate.net/profile/Augustina-Agor/publication/381917982_6172_A_Classification_System_for_Routing_Protocols/links/66846fc62aa57f3b8268bc3b/6172-A-Classification-System-for-Routing-Protocols.pdf

13. Twum Frimpong, **James Benjamin Hayfron Acquah**, Yaw Marfo Missah, John Kwao Dawson, Ben Beklisi Kwame Ayawli, Philemon Baah, Samuel Akyeramfo Sam (2024). Securing cloud data using secret key 4 optimization algorithm (SK4OA) with a non-linearity run time trend. *PLoS ONE*. https://doi.org/10.1371/journal.pone.0301760

14. D. A. Arhnful, H. Otoo, **J. Acquah** (2024). Stability Analysis Techniques for Commensurate Fractional-Order Systems with Caputo Derivatives. *Asian Research Journal of Mathematics*. https://doi.org/10.9734/arjom/2024/v20i11860

15. D. A. Arhinful, **J. Acquah**, H. Otoo (2024). Stability Analysis of the Chaotic Reverse Butterfly-Shaped Dynamical System Represented in State Variable form Using Hurwitz Polynomials. *Journal of Advances in Mathematics and Computer Science*. https://doi.org/10.9734/jamcs/2024/v39i101933

16. F Twum, **JBH Acquah**, Y Missah (2023). Ensuring Data Confidentiality and Privacy in the Cloud using Non-Deterministic Cryptographic Scheme. *International journal of computer science and network security: IJCSNS*. https://scienceon.kisti.re.kr/srch/selectPORSrchArticle.do?cn=JAKO202322852774688

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21. Michael Owusu-Adjei, **James Ben Hayfron-Acquah**, Frimpong Twum, Gaddafi Abdul-Salaam (2023). Machine Learning Modeling of Disease Treatment Default: A Comparative Analysis of Classification Models. *Advances in Public Health*. https://doi.org/10.1155/2023/4168770

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28. John Kwao Dawson, Frimpong Twum, **James Hayfron Acquah**, Yaw Marfo Missah (2022). Ensuring Privacy and Confidentiality of Data on the Cloud Using an Enhanced Homomorphism Scheme. *Informatica*. https://doi.org/10.31449/inf.v46i8.4305

29. Emmanuel Ahene, Joojo Walker, Rose-mary Owusuaa Mensah Gyening, Gaddafi Abdul-Salaam, **James Ben Hayfron-Acquah** (2022). Heterogeneous signcryption with proxy re-encryption and its application in EHR systems. *Telecommunication Systems*. https://doi.org/10.1007/s11235-022-00886-2

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