

Mighty Abra Ayidzoe (Ph.D.)

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Personal Information

Gender 📌 Female
Religion 📌 Christianity
Nationality 📌 Ghanaian
Language 📌 English, Ewe, Twi, Hausa

Summary

Summary 📌 **Result-oriented and dynamic. I have more than 2 years experience in teaching and supervision of University students using student centered learning approach. I am enthusiastic about problem-solving and research. I am a team player and dedicated to achieving goals.**

Skills

Coding 📌 Python, TensorFlow, PyTorch, HTML, PhP, Java
Research 📌 Writing and publication competencies for Artificial Intelligence and Internet of Things.

Work Experience

November 2023 – present 📌 **Lecturer**, at the Department of Computer Science and Informatics, University of Energy and Natural Resources (UENR), Sunyani-Ghana. Teaching and supervision of undergraduate students' projects.

2022 – present 📌 **Co-Principal Investigator**, African Technology Policy Network (ATPS) Grant Number AFS-1233809296, Nairobi, Kenya, for the Development of a Deep Learning-based Mobile and Web applications for the detection of crop pests and diseases.

Feb 2021 – Nov 2023 📌 **Assistant Lecturer**, at the Department of Computer Science and Informatics, University of Energy and Natural Resources (UENR), Sunyani-Ghana. Teaching and supervision of undergraduate students' projects.

Education

2020 – 2023 📌 **PhD. Software Engineering, School of Information and Software Engineering, University of Electronic Science and Technology of China (UESTC)**
Dissertation title: *Research on Capsule Network for Medical Image Recognition.*

2018 – 2020 📌 **MEng. Software Engineering, School of Information and Software Engineering, University of Electronic Science and Technology of China (UESTC)**
Thesis title: *Facial Expression Recognition using Capsule Network.*

Education (continued)

2013– 2017





■ **B.Sc. Computing-with-Accounting, Department of Computer Science, University for Development Studies (UDS):.**

Project title: *Food VendorApp: An Android Base Application for Food Vendors in the Navrongo Community.*




Research Publications

Sample Journal Articles

- 1 K. Adu, J. Walker, P. K. Mensah, **Ayidzoe, Mighty Abra**, M. Opoku, and S. Boateng, "Squeezecapsnet: Enhancing capsule networks with squeezeNet for holistic medical and complex images," *Multimedia Tools and Applications*, pp. 1–30, 2023.  DOI: <https://doi.org/10.1007/s11042-023-15089-3>.
- 2 **Ayidzoe, Mighty Abra**, Y. Yu, P. K. Mensah, J. Cai, E. Y. Baagyere, and F. U. Bawah, "Sinocaps: Recognition of colorectal polyps using sinogram capsule network," *Journal of Intelligent and Fuzzy Systems*, vol. 44, no. 2, pp. 3079–3091, 2023.  DOI: <https://doi.org/10.3233/JIFS-212168>.
- 3 P. K. Mensah, V. Akoto-Adjepong, **Ayidzoe, Mighty Abra, et al.**, "Ccmt: Dataset for crop pest and disease detection," *Data in Brief*, p. 109306, 2023.  DOI: <https://doi.org/10.1016/j.dib.2023.109306>.
- 4 K. Adu, P. K. Mensah, **Ayidzoe, Mighty Abra, et al.**, "Gc3558: An open-source annotated dataset of Ghana currency images for classification modeling," *Data in Brief*, vol. 45, p. 108616, 2022.  DOI: <https://doi.org/10.1016/j.dib.2022.108616>.
- 5 **Ayidzoe, Mighty Abra**, Y. Yongbin, P. K. Mensah, J. Cai, and F. U. Bawah, "Visual interpretability of capsule network for medical image analysis," *Turkish Journal of Electrical Engineering and Computer Sciences*, vol. 30, no. 3, pp. 978–995, 2022.  DOI: <https://dx.doi.org/10.55730/1300-0632.3822>.
- 6 P. M. Kwabena, B. A. Weyori, and **Mighty, Ayidzoe Abra**, "Exploring the performance of lbp-capsule networks with k-means routing on complex images," *Journal of King Saud University-Computer and Information Sciences*, vol. 34, no. 6, pp. 2574–2588, 2022.  DOI: <https://doi.org/10.1016/j.jksuci.2020.10.006>.
- 7 P. K. Mensah and **Ayidzoe, Mighty Abra**, "Overview of capsnet performance evaluation methods for image classification using a dual input capsule network as a case study," *International Journal of Computing and Digital Systems*, vol. 11, no. 1, pp. 29–43, 2022.  DOI: <https://dx.doi.org/10.12785/ijcds/120104>.
- 8 P. K. Mensah, **Ayidzoe, Mighty Abra**, A. A. Opoku, *et al.*, "Uncertainty estimation using variational mixture of Gaussians capsule network for health image classification," *Computational Intelligence and Neuroscience*, vol. 2022, 2022.  DOI: <https://doi.org/10.1155/2022/4984490>.
- 9 M. K. Patrick, A. F. Adekoya, **Mighty, Ayidzoe Abra**, and B. Y. Edward, "Capsule networks—a survey," *Journal of King Saud University-computer and information sciences*, vol. 34, no. 1, pp. 1295–1310, 2022.  DOI: <https://doi.org/10.1016/j.jksuci.2019.09.014>.
- 10 **Abra Ayidzoe, Mighty**, Y. Yu, P. K. Mensah, J. Cai, K. Adu, and Y. Tang, "Gabor capsule network with preprocessing blocks for the recognition of complex images," *Machine Vision and Applications*, vol. 32, no. 4, p. 91, 2021.  DOI: <https://doi.org/10.1007/s00138-021-01221-6>.
- 11 **Ayidzoe, Mighty Abra**, Y. Yu, P. K. Mensah, J. Cai, A. Kwabena, and N. Tashi, "Feature amplification capsule network for complex images," *Journal of Intelligent and Fuzzy Systems*, vol. 40, no. 6, pp. 10955–10968, 2021.  DOI: <https://doi.org/10.3233/JIFS-202080>.

- 12 P. K. Mensah, A. A. Amponsah, **Ayidzoe, Abra Mighty**, et al., "Multi-lane lbp-gabor capsule network with k-means routing for medical image analysis," *International Journal of Advanced Computer Science and Applications*, vol. 12, no. 10, 2021.  DOI: <http://dx.doi.org/10.14569/IJACSA.2021.0121031>.
- 13 P. K. Mensah, B. A. Weyori, and **Ayidzoe, Mighty Abra**, "Capsule network with k-means routing for plant disease recognition," *Journal of Intelligent & Fuzzy Systems*, vol. 40, no. 1, pp. 1025–1036, 2021.  DOI: <https://doi.org/10.3233/JIFS-201226>.
- 14 P. K. Mensah, B. A. Weyori, and **Ayidzoe, Mighty Abra**, "Evaluating shallow capsule networks on complex images," *International Journal of Information Technology*, vol. 13, no. 3, pp. 1047–1057, 2021.  DOI: <https://doi.org/10.1007/s41870-021-00694-y>.
- 15 P. M. Kwabena, B. A. Weyori, and **Mighty, Ayidzoe Abra**, "Gabor capsule network for plant disease detection," *International Journal of Advanced Computer Science and Applications*, vol. 11, no. 10, 2020.  DOI: <http://dx.doi.org/10.14569/IJACSA.2020.0111048>.

Conference Proceedings

- 1 I. K. Nti, O. Nyarko-Boateng, **Abra Ayidzoe, Mighty**, et al., "Intelligent computational model for accurate and early diagnosis of heart failure," in *Proceedings of International Conference on Data Science and Applications: ICDSA 2022, Volume 1*, Springer, 2023, pp. 383–397.  DOI: https://doi.org/10.1007/978-981-19-6631-6_27.
- 2 **Ayidzoe, Mighty Abra**, Y. Yu, P. K. Mensah, J. Cai, F. U. Bawah, and O. Nyarko-Boateng, "Patch-based capsule network for complex images," in *2021 IEEE 8th International Conference on Adaptive Science and Technology (ICAST)*, IEEE, 2021, pp. 1–7.  DOI: <https://doi.org/10.1109/ICAST52759.2021.9681959>.
- 3 M. K. Patrick, B. A. Weyori, and **Mighty, Ayidzoe Abra**, "Max-pooled fast learning gabor capsule network," in *2020 International Conference on Artificial Intelligence, Big Data, Computing and Data Communication Systems (icABCD)*, IEEE, 2020, pp. 1–8.  DOI: <https://doi.org/10.1109/icABCD49160.2020.9183823>.

References

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