CURRICULUM VITAE

PERSONAL DATA

Name	AKM Azad
Nationality	Australian
Position	Assistant Professor
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EDUCATION

Year	Academic Degree	Institution
2017	Ph.D.	Monash University, Australia
2012	MSc	Gwangju Institute of Science & Technology, South Korea
2008	BSc	University of Dhaka, Bangladesh

WORK EXPERIENCE

Period	Position	Address
2021 - 2022	Senior Research Officer (Data Scientist)	ProCan®, Cancer Data Science Group, Children's Medical Research Institute, Westmead, Australia
2019 - 2022	Lecturer	Faculty of Science & Technology, Swinburne University of Technology Sydney, Australia
2020 - 2021	Research Fellow	iThree Institute, University of Technology Sydney, Australia
2018 - 2020	Post-doctoral Research Associate in AI/ML/DL/Bioinformatics,	School of Biotechnology and Biomolecular Sciences, UNSW Sydney, Australia
2019 – 2020	Bioinformatician	Kolling Institute of Medical Research, University of Sydney, Australia

2017 - 2018	Post-doctoral Research Fellow	Monash University, Australia
2010 - 2013	Researcher & Research Assistant	Gwangju Institute of Science & Technology, South Korea

RESEARCH INTERESTS

Biostatistics, Bayesian Methods, Bayesian Network, Probabilistic Network Modelling, Network Pharmacology, Machine learnign and Deep learning frameworks, Supervised and Unsupervised Analysis, and Data Analytics

PUBLICATIONS

1. Hasan, M. M., Hossain, M. A., Alotaibi, N., Arnold, J. F., & **Azad, AKM** (2023). Binocular Rivalry Impact on Macroblock-Loss Error Concealment for Stereoscopic 3D Video Transmission. Sensors, 23(7), 3604.
2. Ahamad, M. M., Aktar, S., Uddin, M. J., Rashed-Al-Mahfuz, M., **Azad, AKM**, … Moni, M. A. (2022). Adverse Effects of COVID-19 Vaccination: Machine Learning and Statistical Approach to Identify and Classify Incidences of Morbidity and Postvaccination Reactogenicity. Healthcare (Basel). 11(1):31.
3. Hossain, M. M., Hasan, M. M., Rahim, M. A., Rahman, M. M., Yousuf, M. A., Al-Ashhab, S., … **Azad, AKM**, Moni, M. A. (2022). Particle Swarm Optimized Fuzzy CNN With Quantitative Feature Fusion for Ultrasound Image Quality Identification. IEEE Journal of Translational Engineering in Health and Medicine, 10, 1–12.
4. Ahamad, M. M., Aktar, S., Uddin, M. J., Rahman, T., Alyami, S. A., Al-Ashhab, S., … **Azad, AKM**, Moni, M. A. (2022). Early-Stage Detection of Ovarian Cancer Based on Clinical Data Using Machine Learning Approaches. Journal of Personalized Medicine, 12(8), 1211.
5. Khatun, M. A., Yousuf, M. A., Ahmed, S., Uddin, M. Z., Alyami, S. A., Al-Ashhab, S., … **Azad, AKM**, Moni, M. A. (2022). Deep CNN-LSTM with self-attention model for human activity recognition using wearable sensor. IEEE Journal of Translational Engineering in Health and Medicine, 10, 1–16.
6. Al-Ashhab, S., Wei, D., Alyami, S. A., **Azad, AKM**, & Moni, M. A. (2022). Mutual Interdependence of the Physical Parameters Governing the Boundary-Layer Flow of Non-Newtonian Fluids. Applied Sciences, 12(10), 5275.
7. Aurna, N. F., Yousuf, M. A., Taher, K. A., **Azad, AKM**, & Moni, M. A. (2022). A classification of MRI brain tumor based on two stage feature level ensemble of deep CNN models. Computers in Biology and Medicine, 146, 105539.
8. Islam, M. K., Rahman, M. H., Islam, M. R., Islam, M. Z., Mamun, M. M. I., **Azad, AKM**, & Moni, M. A. (2022). Network based systems biology approach to identify diseasome and comorbidity associations of Systemic Sclerosis with cancers. Heliyon, 8(2), e08892.
9. Dinarvand, M., Kock, F., Al Mouiee, D., Vuong, K., Vijayan, A., Tanzim, A. F., **Azad, AKM**,… Vafaee, F. (2022). dRNASb: a systems biology approach to decipher dynamics of host-pathogen interactions using temporal dual RNA-seq data. Microbial Genomics, 8(9)

10. Shahriari, S., Hossein Rashidi, T., **Azad, AKM** & Vafaee, F. (2021). COVIDSpread: real-time prediction of COVID-19 spread based on time-series modelling. F1000Research, 10, 1110.

11. Faruqui, N., Yousuf, M. A., Whaiduzzaman, M., **Azad, AKM**, Barros, A., & Moni, M. A. (2021). LungNet: A hybrid deep-CNN model for lung cancer diagnosis using CT and wearable sensor-based medical IoT data. Computers in Biology and Medicine, 139, 104961.

12. Chowdhury, U. N., Faruqe, M. O., Mehedy, M., Ahmad, S., Islam, M. B., Shoombuatong, W., … **Azad, AKM**, Moni, M. A. (2021). Effects of Bacille Calmette Guerin (BCG) vaccination during COVID-19 infection. Computers in Biology and Medicine, 138, 104891.

13. Nyberg, E. P., Nicholson, A. E., Korb, K. B., Wybrow, M., Zukerman, I., Mascaro, S., … **Azad, AKM**, Bolger F., Hahn U., Lagnado, D. (2022). BARD: A structured technique for group elicitation of bayesian networks to support analytic reasoning. Risk Analysis, 42(6), 1155–1178.

14. Islam, M. R., Moni, M. A., Islam, M. M., Rashed-Al-Mahfuz, M., Islam, M. S., Hasan, M. K., … **Azad, AKM**, Alyami, S. A., Ahad, M. A. R., Lio , P. (2021). Emotion Recognition from EEG Signal Focusing on Deep Learning and Shallow Learning Techniques. IEEE Access, 9, 94601–94624.

15. Chakraborty, P., Ahmed, S., Yousuf, M. A., **Azad, AKM**, Alyami, S. A., & Moni, M. A. (2021). A Human-Robot Interaction System Calculating Visual Focus of Human's Attention Level. IEEE Access, vol. 9, pp. 93409-93421

16. Akter, T., Ali, M. H., Khan, M. I., Satu, M. S., Uddin, M. J., Alyami, S. A., … **Azad, AKM**, Moni, M. A. (2021). Improved Transfer-Learning-Based Facial Recognition Framework to Detect Autistic Children at an Early Stage. Brain Sciences, 11, 6.

17. Nashiry, M. A., Sumi, S. S., Shohan, M. U. S., Alyami, S. A., **Azad, AKM**, & Moni, M. A. (2021). Bioinformatics and system biology approaches to identify the diseasome and comorbidities complexities of SARS-CoV-2 infection with the digestive tract disorders. Briefings in Bioinformatics, (bbab126).

18. **Azad, AKM**, & Alyami, S. A. (2021). Discovering novel cancer bio-markers in acquired lapatinib resistance using Bayesian methods. Briefings in Bioinformatics, (bbab137)

19. Aktar, S., Ahamad, M. M., Rashed-Al-Mahfuz, M., **Azad, AKM**, Uddin, S., Kamal, A. H. M., … Others. (2021). Machine Learning Approach to Predicting COVID-19 Disease Severity Based on Clinical Blood Test Data: Statistical Analysis and Model Development. JMIR Med Inform. 2021 Apr 13;9(4):e25884. doi: 10.2196/25884.

20. Rashed-Al-Mahfuz, M., Haque, A., **Azad, AKM**, Alyami, S. A., Quinn, J. M. W., & Moni, M. A. (2021). Clinically Applicable Machine Learning Approaches to Identify Attributes of Chronic Kidney Disease (CKD) for Use in Low-Cost Diagnostic Screening. IEEE J Transl Eng Health Med. 2021 Apr 15;9:4900511. doi: 10.1109/JTEHM.2021.3073629.

21. **Azad, AKM**, Fatima, S., & Vafaee, F. (2021). Integrative resource for network-based investigation of COVID-19 combinatorial drug repositioning and mechanism of action. Patterns (N Y). 2021 Sep 10;2(9):100325. doi: 10.1016/j.patter.2021.100325.

22. **Azad, AKM**, Dinarvand, M., Nematollahi, A., Swift, J., Lutze-Mann, L., & Vafaee, F. (2021). A comprehensive integrated drug similarity resource for in-silico drug repositioning and beyond. Briefings in Bioinformatics. 22(3):bbaa126. doi: 10.1093/bib/bbaa126. PMID: 32597467.

23. **Azad, AKM**, Lawen, A., & Keith, J. M. (2018). Cross-Talk Categorisations in Data-Driven Models of Signalling Networks: A System-Level View. InTech. doi: 10.5772/intechopen.72408

24. **Azad, AKM**, Lawen, A., & Keith, J. M. (2017). Bayesian model of signal rewiring reveals mechanisms of gene dysregulation in acquired drug resistance in breast cancer. PLoS One, 12(3), e0173331.

25. **Azad, AKM** (2017). Integrating heterogeneous datasets for cancer module identification. Bioinformatics: Volume II: Structure, Function, and Applications, 119–137.

26. Alyami, S. A., **Azad, AKM**, & Keith, J. M. (2016). The neighborhood MCMC sampler for learning bayesian networks. First International Workshop on Pattern Recognition, 10011, 100111K. International Society for Optics and Photonics.

27. Alyami, S. A., **Azad, AKM**, & Keith, J. M. (2016). Uniform Sampling of Directed and Undirected Graphs Conditional on Vertex Connectivity. Electronic Notes in Discrete Mathematics, 53, 43–55.

28. **Azad, AKM**, Lawen, A., & Keith, J. M. (2015). Prediction of signaling cross-talks contributing to acquired drug resistance in breast cancer cells by Bayesian statistical modeling. BMC Systems Biology, 9, 1–17.

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30. **Azad, AKM**, Shahid, S., Noman, N., & Lee, H. (2011). Prediction of plant promoters based on hexamers and random triplet pair analysis. Algorithms for Molecular Biology, 6(1), 1–10.