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Education:

Doctor of Philosophy (PhD) in Computer Science and Software Engineering (Ongoing)

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Master of Science (M.Sc.) in Computer Science and Engineering

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Bachelor of Science (B.Sc.) in Computer Science and Engineering

Ahsanullah University of Science & Technology (AUST)

Period of Study: 26 April, 2014 - 03 June, 2018

Academic Advisor: Ms. Qamrun Nahar Eity

Thesis Supervisor: Faisal Muhammad Shah

Publications:

List of Publications

Journal

- Hasib, K.M., Mridha, M.F., Mehedi, M.H.K., Faruk, K.O., Muna, R.K., Iqbal, S., Islam, M.R. and Watanobe, Y., "DCNN: Deep Convolutional Neural Network With XAI for Efficient Detection of Specific Language Impairment in Children," in IEEE Access, vol. 12, pp. 101660-101678, 2024, doi: 10.1109/ACCESS.2024.3431933. [Q1 Journal] [Impact Factor: 3.4].
- Mehedi, M.H.K., Nawer, N., Ahmed, S., Khan, M.S.I., Hasib, K.M., Mridha, M.F., Alam, M.G.R. and Nguyen, T.T., 2024. "PLD-Det: plant leaf disease detection in real time using an end-to-end neural network approach based on improved YOLOv7". Neural Computing and Applications (2024). https://doi.org/10.1007/s00521-024-10409-6. [Q1 Journal] [Impact Factor: 4.5].

- 3. Rahman, M.A., Masum, M.I., Hasib, K.M., Mridha, M.F., Alfarhood, S., Safran, M. and Che, D.,"GliomaCNN: An Effective Lightweight CNN Model in Assessment of Classifying

 Brain Tumor from Magnetic Resonance Images Using Explainable AI," CMES-Computer

 Modeling in Engineering & Sciences 140, no. 3 (2024). [Q3 Journal] [Impact Factor: 2.2].
- Chowdhury, A.K., Sujon, S.R., Shafi, M.S.S., Ahmmad, T., Ahmed, S., Hasib, K.M. and Shah, F.M., "Harnessing large language models over transformer models for detecting Bengali depressive social media text: A comprehensive study." Natural Language Processing Journal 7 (2024): 100075.
- K. M. Hasib, M. R. Islam, S. Sakib, M. A. Akbar, I. Razzak and M. S. Alam, <u>Depression</u>
 <u>Detection From Social Networks Data Based on Machine Learning and Deep Learning</u>
 <u>Techniques: An Interrogative Survey</u>, in IEEE Transactions on Computational Social Systems, vol. 10, no. 4, pp. 1568-1586, Aug. 2023, doi: 10.1109/TCSS.2023.3263128. [Q1
 <u>Journal</u>] [Impact Factor: 4.5].
- 6. **Hasib, K.M.**, Towhid, N.A., Faruk, K.O., Al Mahmud, J. and Mridha, M.F., 2023. <u>Strategies for enhancing the performance of news article classification in Bangla: Handling imbalance and interpretation</u>. Engineering Applications of Artificial Intelligence, 125, p.106688, doi: https://doi.org/10.1016/j.engappai.2023.106688. [Q1 Journal] [Impact Factor: 7.5].
- 7. Lima KA, Md Hasib K, Azam S, Karim A, Montaha S, Noori SRH, Jonkman M., (2023). A novel Data and Model Centric artificial intelligence based approach in developing high-performance Named Entity Recognition for Bengali Language. PLOS ONE 18(9): e0287818. https://doi.org/10.1371/journal.pone.0287818. [Q1 Journal] [Impact Factor: 2.9]
- 8. Hasib, K.M., Azam, S., Karim, A., Marouf, A.A., Shamrat, F.J.M., Montaha, S., Yeo, K.C., Jonkman, M., Alhajj, R. and Rokne, J.G., (2023). MCNN-LSTM: Combining CNN and LSTM to Classify Multi-Class Text in Imbalanced News Data. IEEE Access, vol. 11, pp. 93048-93063, 2023, doi: 10.1109/ACCESS.2023.3309697. [Q1 Journal] [Impact Factor: 3.4]
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- 17. Hasib, K. M., Towhid, N. A., & Islam, M. R. (2021). HSDLM: A Hybrid Sampling With Deep Learning Method for Imbalanced Data Classification. International Journal of Cloud Applications and Computing (IJCAC), 11(4), 1-13. http://doi.org/10.4018/IJCAC.2021100101. [Q2 Journal] [Impact Factor: 4.9].
- M. H. Hassan, M. Raihan, M. M. Hassan, R. N. Smrity, L. Akter, M. M. Rahman, S. Zaman, K. M. Hasib, N. Jahan, J. Farhana, S. Mollick. (2021). Efficient Prediction of Water Quality Index (WQI) Using Machine Learning Algorithm. Hum-Centric Intell Syst, 1(3-4), 86–97. https://doi.org/10.2991/hcis.k.211203.001.
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 A Comparative Study of AHP and Fuzzy AHP Method for Inconsistent
 International Journal of Sciences: Basic and Applied Research (IJSBAR). 54 (4). 16 37. [Scopus Indexed]

Book Chapter

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- 2. Md. Hasib, K., Oli Ullah, M., Imran Nazir, M., Akter, A., Saifur Rahman, M. (2024). <u>ICDP: An Improved Convolutional Neural Network Model to Detect Pneumonia from Chest X-Ray</u>

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- 3. Kirabo, C., Murindanyi, S., Kirabo, N.P., **Hasib, K.M.**, Marvin, G. (2024). SHapley Additive exPlanations for Machine Emotion Intelligence in CNNs. In: Tiwari, R., Saraswat, M., Pavone, M. (eds) Proceedings of International Conference on Computational Intelligence. ICCI 2023. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-97-3526-6_50.
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- Hasib, K.M., Showrov, M.I.H., Al Mahmud, J., Mithu, K.
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- Javed Mehedi Shamrat F.M., Ranjan R., Hasib K.M., Yadav A., Siddique A.H.
 (2022) Performance Evaluation Among ID3, C4.5, and CART Decision Tree Algorithm. In: Ranganathan G., Bestak R., Palanisamy R., Rocha Á. (eds) Pervasive Computing and Social Networking. Lecture Notes in Networks and Systems, vol 317. Springer, Singapore. https://doi.org/10.1007/978-981-16-5640-8 11.
- Sakib S., Yasmin N., Tanzeem A.K., Shorna F., Md. Hasib K., Alam S.B. (2022) <u>Breast Cancer Detection and Classification: A Comparative Analysis Using Machine Learning Algorithms</u>. In: Bindhu V., Tavares J.M.R.S., Du KL. (eds) Proceedings of Third International Conference on Communication, Computing and Electronics Systems. Lecture Notes in Electrical Engineering, vol 844. Springer, Singapore. https://doi.org/10.1007/978-981-16-8862-1 46.
- Zobaed, S., Rabby, F., Hossain, I., Hossain, E., Hasan, S., Karim, A., & Hasib, K.
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 <u>Learning. In: Montasari R., Jahankhani H. (eds) Artificial Intelligence in Cyber Security: Impact and Implications. Advanced Sciences and Technologies for Security Applications. Springer, Cham. https://doi.org/10.1007/978-3-030-88040-8 7.
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Conference Proceedings

- K. M. Hasib, M. A. Rahman, M. I. Masum, F. D. Boer, S. Azam and A. Karim, "Bengali News Abstractive Summarization: T5 Transformer and Hybrid Approach," 2023 International Conference on Digital Image Computing: Techniques and Applications (DICTA), Port Macquarie, Australia, 2023, pp. 539-545, doi: 10.1109/DICTA60407.2023.00080. [Australiasian Rank B Conference].
- 2. Md Humaion Kabir Mehedi, Irfana Arafin, **Khan Md Hasib**, Farhin Rahman, Md. Mustakin Alam, Rufaida Tasin, and Annajiat Alim Rasel. 2023. <u>Early Autism Disorder Detection</u>

- Through Visualizing Eye-Tracking Patterns Using Compact Convolutional Transformers. In Proceedings of the 2023 9th International Conference on Computer Technology Applications (ICCTA '23). Association for Computing Machinery, New York, NY, USA, 109–114. https://doi.org/10.1145/3605423.3605429.
- 3. F. T. J. Faria, M. Bin Moin, A. Al Wase, M. R. Sani, K. M. Hasib and M. S. Alam, "Classification of Potato Disease with Digital Image Processing Technique: A Hybrid Deep Learning Framework," 2023 IEEE 13th Annual Computing and Communication Workshop and Conference (CCWC), Las Vegas, NV, USA, 2023, pp. 0820-0826, doi: 10.1109/CCWC57344.2023.10099162.
- M. N. R. Khan, O. Al Tanim, M. S. Salsabil, S. M. R. Reza, K. M. Hasib and M. S. Alam, "A Multi-modal Deep Learning Approach for Predicting Dhaka Stock Exchange," 2023 IEEE 13th Annual Computing and Communication Workshop and Conference (CCWC), Las Vegas, NV, USA, 2023, pp. 0879-0885, doi: 10.1109/CCWC57344.2023.10099255.
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- Dhakal, S., Azam, S., Hasib, K.M., Karim, A., Jonkman, M. and Al Haque, A.F.,
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- K. M. Hasib, M. A. Rahman, M. Tahsin, A. Karim, S. Azam and F. DeBoer, "LFR Waiter: <u>Arduino Based Android Application Controlled Waiter Robot</u>," TENCON 2022 - 2022 IEEE Region 10 Conference (TENCON), 2022, pp. 1-6, doi: 10.1109/TENCON55691.2022.9977936. [IEEE, Scopus Indexed] [CORE C Rank Conference].
- 8. **K. M. Hasib,** S. Sakib, J. A. Mahmud, K. Mithu, M. S. Rahman and M. S. Alam, "COVID-19 Prediction based on Infected Cases and Deaths of Bangladesh using Deep Transfer Learning," 2022 IEEE World AI IoT Congress (AlloT), 2022, pp. 296-302, doi: 10.1109/AlloT54504.2022.9817160.
- 9. **K. M. Hasib**, F. Rahman, R. Hasnat and M. G. R. Alam, "<u>A Machine Learning and Explainable Al Approach for Predicting Secondary School Student Performance</u>," 2022 IEEE 12th Annual Computing and Communication Workshop and Conference (CCWC), 2022, pp. 0399-0405, doi: 10.1109/CCWC54503.2022.9720806.
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- 11. S. Jabin, M. S. Suhi, M. F. Arefin and **K. M. Hasib**, "Comparison of Different Sentiment Analysis Techniques for Bangla Reviews," 2022 IEEE 10th Region 10 Humanitarian Technology Conference (R10-HTC), 2022, pp. 288-293, doi: 10.1109/R10-HTC54060.2022.9929495.

- 12. **K. M. Hasib,** N. A. Towhid and M. G. R. Alam, "Online Review based

 Sentiment Classification on Bangladesh Airline Service using Supervised Learning," 2021

 5th International Conference on Electrical Engineering and Information & Communication
 Technology (ICEEICT), 2021, pp. 1-6, doi: 10.1109/ICEEICT53905.2021.9667818.
- 13. **K. M. Hasib**, N. A. Towhid and M. G. R. Alam, "<u>Topic Modeling and Sentiment Analysis using Online Reviews for Bangladesh Airlines</u>," 2021 IEEE 12th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), 2021, pp. 0428-0434, doi: 10.1109/IEMCON53756.2021.9623155.
- 14. S. Sakib, **K. M. Hasib,** I. K. Tasawar, A. K. Tanzeem, M. F. Arefin, S. Islam, M. S. Alam, "A Data-Driven Hybrid Optimization Based Deep Network Model for Short-Term Residential Load Forecasting," 2021 IEEE 12th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), 2021, pp. 0187-0193, doi: 10.1109/IEMCON53756.2021.9623080.
- 15. F. S. Shishir, K. M. Hasib, S. Sakib, S. Maitra and F. M. Shah, "<u>De Novo Drug Property Prediction using Graph Convolutional Neural Networks</u>," 2021 IEEE 9th Region 10 Humanitarian Technology Conference (R10-HTC), 2021, pp. 01-06, doi: 10.1109/R10-HTC53172.2021.9641611.
- J. A. Mahmud, K. M. Hasib, S. Sakib and M. I. Hossain Showrov, "Impact of Pedal Powered Vehicles on Average Traffic Speed in Dhaka City: A Cross-sectional Study Based on Road Class and Timestamp," 2021 IEEE 9th Region 10 Humanitarian Technology Conference (R10-HTC), 2021, pp. 01-06, doi: 10.1109/R10-HTC53172.2021.9641636.
- 17. S. Jahan, M. R. Islam, K. M. Hasib, U. Naseem and M. S. Islam, "Active Learning with an Adaptive Classifier for Inaccessible Big Data Analysis," 2021 International Joint Conference on Neural Networks (IJCNN), 2021, pp. 1-7, doi: 10.1109/IJCNN52387.2021.9534046. [IEEE, Scopus Indexed] [CORE A Rank Conference].
- 18. P. Ghosh, S. Azam, K. M. Hasib, A. Karim, M. Jonkman and A. Anwar, "A Performance Based Study on Deep Learning Algorithms in the Effective Prediction of Breast Cancer," 2021 International Joint Conference on Neural Networks (IJCNN), 2021, pp. 1-8, doi: 10.1109/IJCNN52387.2021.9534293. [IEEE, Scopus Indexed] [CORE A Rank Conference].
- M. I. Hossain Showrov, V. Kumar Dubey, K. M. Hasib and M. A. Shameem,
 "News Classification from Microblogging Dataset using Supervised Learning," 2021
 International Conference on Computing, Communication, and Intelligent Systems (ICCCIS),
 Greater Noida, India, 2021, pp. 53-57, doi: 10.1109/ICCCIS51004.2021.9397074.
- 20. **K. M. Hasib,** M. A. Habib, N. A. Towhid and M. I. H. Showrov, "A Novel Deep Learning based Sentiment Analysis of Twitter Data for US Airline Service," 2021 International Conference on Information and Communication Technology for Sustainable Development (ICICT4SD), Dhaka, Bangladesh, 2021, pp. 450-455, doi: 10.1109/ICICT4SD50815.2021.9396879.
- S. Maitra, T. Hossain, K. M. Hasib and F. S. Shishir, "Graph Theory for Dimensionality Reduction: A Case Study to Prognosticate Parkinson's," 2020 11th IEEE Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), Vancouver, BC, Canada, 2020, pp. 0134-0140, doi: 10.1109/IEMCON51383.2020.9284926.

- 22. Karim, Asif and Ghosh, Pronab and Anjum, Atqiya Abida and Junayed, Masum Shah and Md, Zahid Hasan and Hasib, Khan Md. and Bin Emran, Al Nahian, <u>A Comparative Study of Different Deep Learning Model for Recognition of Handwriting Digits</u> (January 19, 2021). ICICNIS 2020, Available at SSRN: https://ssrn.com/abstract=3769231 or http://dx.doi.org/10.2139/ssrn.3769231.
- 23. **K. M. Hasib**, M. I. H. Showrov and A. Das, "Accidental Prone Area Detection in Bangladesh using Machine Learning Model," 2020 3rd International Conference on Computer and Informatics Engineering (IC2IE), Yogyakarta, Indonesia, 2020, pp. 58-62, doi: 10.1109/IC2IE50715.2020.9274581.
- 24. M. H. Popel, **K. M. Hasib**, S. Ahsan Habib and F. Muhammad Shah, <u>"A Hybrid Under-Sampling Method (HUSBoost) to Classify Imbalanced Data,"</u> 2018 21st International Conference of Computer and Information Technology (ICCIT), Dhaka, Bangladesh, 2018, pp. 1-7, doi: 10.1109/ICCITECHN.2018.8631915.

Dataset Published

- BANGLADESH AIRLINES SENTIMENT REVIEW DATASET https://ieee-dataport.org/documents/bangladesh-airlines-sentiment-review-dataset doi:10.21227/6fg6-s460.
- BANGLADESH ROAD ACCIDENT DATASET https://ieee-dataport.org/documents/bangladesh-road-accident-dataset doi: https://dx.doi.org/10.21227/efjr-n994.
- 3. BANGLADESHI CHILDREN LANGUAGE IMPAIRMENT DATASET
 https://data.mendeley.com/datasets/4tv4pvs3hh?fbclid=lwAR3v3Ion5x8ap9kAv5AxigLffGa
 nZhr85HqlVOq4LlwyYihJ2e88JjA3v2w

Academic Honors

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- Merit Based Scholarship Semester wise in Brac University, 2021
- Dhaka Educational General Scholarship for excellence in the HSC examination, 2013
- Dhaka Educational Board Scholarship for excellence in the SSC examination, 2011
- Scholers Forum General Scholarship for excellence in the class 9 scholars examination, 2009
- Dhaka Educational General Scholarship for excellence in the class 8 examination, 2008

Awards

- Achieved Highest Distinction Award in Brac University for highest CGPA, 2022.
- Champion at "Software Mobile Application Category" in Intra Aust Technomania, 2016.
- 2nd Runners Up at "Dhaka Division National Language Competitions" organised by Prothom Alo, 2008.
- Best Presenter Award at ICCIT-2018 in United International University, 2018.

- Best Paper Award on Machine Intelligence Session at ICCIT-2018 in United International University, 2018.
- Best Paper Award on Data Mining and Data Analytics and Big Data Session at IEMCON-2020 in Vancouver, Canada, 2020.
- <u>Best Paper Award</u> on Signal Detection and Processing Session at <u>IEMCON-2021</u> in Vancouver, Canada, 2020.
- Best Presenter Award at CCWC-2022 in Las Vegas, USA, 2022.
- Best Paper Award on Artificial Intelligence and Machine Learning Session at CCWC-2022 in Las Vegas, USA, 2022.
- Best Paper Award in Human-Centric Intelligent Systems Journal, Springer Publisher, 2022.