

Md Mohsin Kabir

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RG ResearchGate

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Academic Experience

- 2023 – **Research Associate**, Advanced Machine Intelligence Research Lab, Bangladesh.
- 2021 – **Lecturer**, Department of Computer Science and Engineering, Bangladesh University of Business & Technology (BUBT), Dhaka, Bangladesh (On study leave).
- 2022 – 2023 **Research Assistant**, King Abdulaziz University (KAU), Jeddah, Saudi Arabia.
- 2021 – 2022 **Research Assistant**, Government Project in collaboration with Bangladesh University of Business and Technology and Reve Systems, Bangladesh.
- 2020 – 2022 **Researcher**, Advanced Machine Learning Lab, BUBT.

Education

- 2022 – **Erasmus Mundus Joint Master in Intelligent Field Robotic System (IFRoS).**
University of Girona, Spain: Field robotics, with focus on land and marine robots
Eötvös Loránd University, Hungary: Autonomous systems & self-driving land vehicles
- 2017 – 2021 **Bachelor of Science in Computer Science and Engineering**, Bangladesh University of Business & Technology, Bangladesh.
Final grade: 3.99/4.00 (Ranked 1st amongst 350 graduates)
Thesis title: *Human Abnormality Classification Using Combined CNN-RNN Approach.*

Selected Publications

Journal Articles

- 1 Nobel, S. N., Imran, M. A., Bina, N. Z., **Kabir, M. M.**, Safran, M., Alfarhood, S., & Mridha, M. (2024). Palm leaf health management: A hybrid approach for automated disease detection and therapy enhancement. *IEEE Access*.
- 2 Islam, M. R., Oliullah, K., **Kabir, M. M.**, Alom, M., & Mridha, M. (2023). Machine learning enabled iot system for soil nutrients monitoring and crop recommendation. *Journal of Agriculture and Food Research*, 14, 100880.
- 3 Islam, M. R., **Kabir, M. M.**, Mridha, M. F., Alfarhood, S., Safran, M., & Che, D. (2023). Deep learning-based iot system for remote monitoring and early detection of health issues in real-time. *Sensors*, 23(11). doi:10.3390/s23115204
- 4 Jim, J. R., Hosain, M. T., Mridha, M., **Kabir, M. M.**, & Shin, J. (2023). Towards trustworthy metaverse: Advancements and challenges. *IEEE Access*.
- 5 **Kabir, M. M.**, Shin, J., & Mridha, M. (2023). Secure your steps: A class-based ensemble framework for real-time fall detection using deep neural networks. *IEEE Access*. doi:10.1109/ACCESS.2023.3289402
- 6 Keya, A. J., Arpona, S. A., **Kabir, M. M.**, & Mridha, M. F. (2023). Recurrent albert for recommendation: A hybrid architecture for accurate and lightweight restaurant recommendations. *Cognitive Computation and Systems*.
- 7 Keya, A. J., **Kabir, M. M.**, Shammey, N. J., Mridha, M., Islam, M. R., & Watanobe, Y. (2023). G-bert: An efficient method for identifying hate speech in bengali texts on social media. *IEEE Access*. doi:10.1109/ACCESS.2023.3299021

- 8 Mahmud, I., **Kabir, M. M.**, Mridha, M. F., Alfarhood, S., Safran, M., & Che, D. (2023). Cardiac failure forecasting based on clinical data using a lightweight machine learning metamodel. *Diagnostics*, 13(15). [doi:10.3390/diagnostics13152540](https://doi.org/10.3390/diagnostics13152540)
- 9 Mahmud, I., **Kabir, M. M.**, Shin, J., Mistry, C., Tomioka, Y., & Mridha, M. (2023). Advancing wildlife protection: Mask r-cnn for rail track identification and unwanted object detection. *IEEE Access*.
- 10 Mridha, M., Mohammad, Z., **Kabir, M. M.**, Lima, A. A., Das, S. C., Islam, M. R., & Watanobe, Y. (2023). An unsupervised writer identification based on generating clusterable embeddings. *Computer Systems Science and Engineering*, 46(2), 2059–2073. [doi:10.32604/csse.2023.032977](https://doi.org/10.32604/csse.2023.032977)
- 11 **Kabir, M. M.**, Ishraq, A., Nur, K., & Mridha, M. (2022). Content-based image retrieval using autoembedder. *Journal of Advances in Information Technology Vol*, 13(3). [doi:10.12720/jait.13.3.240-248](https://doi.org/10.12720/jait.13.3.240-248)
- 12 Lima, A. A., Mridha, M. F., Das, S. C., **Kabir, M. M.**, Islam, M. R., & Watanobe, Y. (2022). A comprehensive survey on the detection, classification, and challenges of neurological disorders. *Biology*, 11(3), 469. [doi:10.3390/biology11030469](https://doi.org/10.3390/biology11030469)
- 13 Mohammad, Z., **Kabir, M. M.**, Monowar, M. M., Hamid, M. A., & Mridha, M. F. (2022). Self-writer: Clusterable embedding based self-supervised writer recognition from unlabeled data. *Mathematics*, 10(24), 4796. [doi:10.3390/math10244796](https://doi.org/10.3390/math10244796)
- 14 Mridha, M., Prodeep, A. R., Hoque, A., Islam, M., Lima, A. A., **Kabir, M. M.**, ... Watanobe, Y. et al. (2022). A comprehensive survey on the progress, process, and challenges of lung cancer detection and classification. *Journal of Healthcare Engineering*, 2022. [doi:10.1155/2022/5905230](https://doi.org/10.1155/2022/5905230)
- 15 Wadud, M. A. H., **Kabir, M. M.**, Mridha, M., Ali, M. A., Hamid, M. A., & Monowar, M. M. (2022). How can we manage offensive text in social media-a text classification approach using lstm-boost. *International Journal of Information Management Data Insights*, 2(2), 100095. [doi:10.1016/j.jjime.2022.100095](https://doi.org/10.1016/j.jjime.2022.100095)
- 16 **Kabir, M. M.**, Mridha, M. F., Shin, J., Jahan, I., & Ohi, A. Q. (2021). A survey of speaker recognition: Fundamental theories, recognition methods and opportunities. *IEEE Access*, 9, 79236–79263. [doi:10.1109/ACCESS.2021.3084299](https://doi.org/10.1109/ACCESS.2021.3084299)
- 17 Mridha, M. F., Das, S. C., **Kabir, M. M.**, Lima, A. A., Islam, M. R., & Watanobe, Y. (2021). Brain-computer interface: Advancement and challenges. *Sensors*, 21(17), 5746. [doi:10.3390/s21175746](https://doi.org/10.3390/s21175746)
- 18 Mridha, M. F., Lima, A. A., Nur, K., Das, S. C., Hasan, M., & **Kabir, M. M.** (2021). A survey of automatic text summarization: Progress, process and challenges. *IEEE Access*, 9, 156043–156070. [doi:10.1109/ACCESS.2021.3129786](https://doi.org/10.1109/ACCESS.2021.3129786)
- 19 Mridha, M. F., Ohi, A. Q., Ali, M. A., Emon, M. I., & **Kabir, M. M.** (2021). Banglawriting: A multi-purpose offline bangla handwriting dataset. *Data in Brief*, 34, 106633. [doi:10.1016/j.dib.2020.106633](https://doi.org/10.1016/j.dib.2020.106633)
- 20 Mridha, M. F., Ohi, A. Q., Shin, J., **Kabir, M. M.**, Monowar, M. M., & Hamid, M. A. (2021). A thresholded gabor-cnn based writer identification system for indic scripts. *IEEE Access*, 9, 132329–132341. [doi:10.1109/ACCESS.2021.3114799](https://doi.org/10.1109/ACCESS.2021.3114799)

Conference Proceedings

- 1 Ishraq, A., Lima, A. A., **Kabir, M. M.**, Rahman, M. S., & Mridha, M. (2022). Assessment of building damage on post-hurricane satellite imagery using improved cnn. In *2022 international conference on decision aid sciences and applications (dasa)* (pp. 665–669). IEEE. [doi:10.1109/DASA54658.2022.9765025](https://doi.org/10.1109/DASA54658.2022.9765025)
- 2 Jani, R., Shanto, M. S. I., **Kabir, M. M.**, Rahman, M. S., & Mridha, M. (2022). Heart disease prediction and analysis using ensemble architecture. In *2022 international conference on decision aid sciences and applications (dasa)* (pp. 1386–1390). IEEE. [doi:10.1109/DASA54658.2022.9765237](https://doi.org/10.1109/DASA54658.2022.9765237)

- 3 **Kabir, M. M.**, Lima, A. A., Mridha, M., Abdul Hamid, M., & Monowar, M. M. (2022). Forecasting closing price of stock market using lstm network: An analysis from the perspective of dhaka stock exchange. In *Proceedings of the international conference on big data, iot, and machine learning* (pp. 289–299). Springer. [doi:10.1007/978-981-16-6636-0_23](https://doi.org/10.1007/978-981-16-6636-0_23)
- 4 Lima, A. A., **Kabir, M. M.**, Das, S. C., Hasan, M., Mridha, M. et al. (2022). Road sign detection using variants of yolo and r-cnn: An analysis from the perspective of bangladesh. In *Proceedings of the international conference on big data, iot, and machine learning* (pp. 555–565). Springer. [doi:10.1007/978-981-16-6636-0_42](https://doi.org/10.1007/978-981-16-6636-0_42)
- 5 Prodeep, A. R., Hoque, A. M., **Kabir, M. M.**, Rahman, M. S., & Mridha, M. (2022). Plant disease identification from leaf images using deep cnn's efficientnet. In *2022 international conference on decision aid sciences and applications (dasa)* (pp. 523–527). IEEE. [doi:10.1109/DASA54658.2022.9765063](https://doi.org/10.1109/DASA54658.2022.9765063)
- 6 **Kabir, M. M.**, Anik, T. A., Abid, M. S., Mridha, M., & Hamid, M. A. (2021). Facial expression recognition using cnn-lstm approach. In *2021 international conference on science & contemporary technologies (icsct)* (pp. 1–6). IEEE. [doi:10.1109/ICSCT53883.2021.9642571](https://doi.org/10.1109/ICSCT53883.2021.9642571)
- 7 **Kabir, M. M.**, Mehera, P., Saha, A. K., Mridha, M., Hamid, M. A., & Monowar, M. M. (2021). Cnn-nsvm architecture for skin lesion classification using non-dermoscopic digital image. In *2021 joint 10th international conference on informatics, electronics & vision (iciev) and 2021 5th international conference on imaging, vision & pattern recognition (icivpr)* (pp. 1–7). IEEE. [doi:10.1109/ICIEVicIVPR52578.2021.9564195](https://doi.org/10.1109/ICIEVicIVPR52578.2021.9564195)
- 8 Mohammad, Z., Jahan, I., **Kabir, M. M.**, Ali, M. A., & Mridha, M. (2021). An offline writer-independent signature verification system using autoembedder. In *2021 24th international conference on computer and information technology (iccit)* (pp. 1–6). IEEE. [doi:10.1109/ICCIT54785.2021.9689780](https://doi.org/10.1109/ICCIT54785.2021.9689780)
- 9 Choyon, M. M. S., Rahman, M., **Kabir, M. M.**, & Mridha, M. (2020). Iot based health monitoring & automated predictive system to confront covid-19. In *2020 ieee 17th international conference on smart communities: Improving quality of life using ict, iot and ai (honet)* (pp. 189–193). IEEE. [doi:10.1109/HONET50430.2020.9322811](https://doi.org/10.1109/HONET50430.2020.9322811)
- 10 **Kabir, M. M.**, Ohi, A. Q., Rahman, M. S., & Mridha, M. F. (2020). An evolution of cnn object classifiers on low-resolution images. In *2020 ieee 17th international conference on smart communities: Improving quality of life using ict, iot and ai (honet)* (pp. 209–213). IEEE. [doi:10.1109/HONET50430.2020.9322661](https://doi.org/10.1109/HONET50430.2020.9322661)
- 11 **Kabir, M. M.**, Safir, F. B., Shahan, S., Maua, J., Awlad, I. A. B., & Mridha, M. (2020). Human abnormality classification using combined cnn-rnn approach. In *2020 ieee 17th international conference on smart communities: Improving quality of life using ict, iot and ai (honet)* (pp. 204–208). IEEE. [doi:10.1109/HONET50430.2020.9322814](https://doi.org/10.1109/HONET50430.2020.9322814)

Book Chapters

- 1 **Kabir, M. M.**, Ohi, A. Q., & Mridha, M. F. (2021). A multi-plant disease diagnosis method using convolutional neural network. In *Computer vision and machine learning in agriculture* (pp. 99–111). [doi:10.1007/978-981-33-6424-0_7](https://doi.org/10.1007/978-981-33-6424-0_7)

Skills

Research Interest	Machine learning, Deep learning, Computer vision, IoT, Robotics.
Coding	Python, Java, C, C++, ...
ML-DL Tools	Keras, TensorFlow, Pandas, NumPy, Matplotlib, PyTorch, ...
Robotics Tools	ROS, Val3 programming, MatLab, Gazebo, OMPL ...
Databases	MySQL, SQLite, Oracle.
Web Dev	HTML, CSS, JavaScript, ...

Skills (continued)

Misc. Academic research, teaching, training, supervising, \LaTeX .

Miscellaneous Experience

Awards and Achievements

- 2022 Academic research, teaching, training, supervising, \LaTeX .
- 2022 **Erasmus Mundus Scholarship**, EMJ Master in Intelligent Field Robotic System, 2022-2024.
- 2022 **Annual Research Publication Award 2021**, Bangladesh University of Business & Technology.
- 2021 **Annual Research Publication Award 2021**, Advanced Machine Learning Lab, BUBT.
- 2020 **Annual Research Publication Award 2020**, Advanced Machine Learning Lab, BUBT.
- 2017 **Merit-based Scholarship**, BUBT Scholarship for consistent SGPA 4.00, 2017-2021.

Research Stat.

- Current **Total Publications:** Journal Articles - 19* | Conference Proceedings - 11* | Book Chapter - 1* | Dataset - 1*.
- Current **Current Citation:** Google Scholar - 378* & ResearchGate - 340*.
- Current **Reviewer:** Mathematics (Q1), Journal of Marine Science and Engineering (Q1), Biology (Q1), Agriculture (Q1), Applied Sciences (Q2), Sensors (Q2), Photonics (Q3), Cognitive Computation and Systems (Q3) and more.

Conference Attendance

- 2023 **International Conference on Big Data, IoT, and Machine Learning**, Bangladesh.
- 2021 **Joint 10th International Conference on Informatics, Electronics & Vision (ICIEV) and 2021 5th International Conference on Imaging, Vision & Pattern Recognition (icIVPR)**, Japan.
- 2021 **International Conference on Big Data, IoT, and Machine Learning**, Bangladesh.
- 2021 **International Conference on Science & Contemporary Technologies (ICSCT)**, Bangladesh.
- 2020 **IEEE 17th International Conference on Smart Communities: Improving Quality of Life Using ICT, IoT and AI (HONET)**, USA.

Selected Projects

- 2023 **Real Time 2D Pose Estimation For Robot Parts Picking.** Computer vision project for robotic automation using Python and OpenCV.
- 2021 **Dynamic Object Detection using User Data.** AI-based web development project for object detection developed using JavaScript, Python, and TensorFlow.js.
- 2020 **Android Application for Lunar Date Identification.** AI-based android project for identifying lunar dates developed using Java, Python, and TensorFlowLite.

Management and Leadership Skills

- 2022 **Mentor.** ICT Olympiad Bangladesh.
- 2021 **Member Secretary.** Research and Publication Committee, Dept. of CSE, BUBT.
- 2021 **Advisor.** Competitive Programming Committee, Dept. of CSE, BUBT.

References

Available on Request