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Deakin University

Hajee Mohammad Danesh Science and Technology University

Employment History

February, 2026 – Present	■ Graduate Research Teaching Fellow , School of Information Technology, <i>Deakin University, Melbourne, VIC, Australia</i> (Fixed Term)
February, 2025 – October, 2025	■ Graduate Research Teaching Fellow , School of Information Technology, <i>Deakin University, Melbourne, VIC, Australia</i> (Fixed Term)
July, 2024 – October, 2024	■ Sessional Academic . School of IT, <i>Deakin University, Burwood, and Geelong campus</i>
Sept 1, 2022 – Till Date	■ Associate Professor , Dept. of Computer Science and Engineering, <i>Hajee Mohammad Danesh Science and Technology University, Dinajpur, Bangladesh. (On leave for PhD studies)</i>
Sept 01, 2017 – Aug 31, 2022	■ Assistant Professor , Dept. of Computer Science and Engineering, <i>Hajee Mohammad Danesh Science and Technology University, Dinajpur, Bangladesh.</i>
Sept 01, 2014 – Aug 31, 2017	■ Lecturer , Dept. of Computer Science and Engineering, <i>Hajee Mohammad Danesh Science and Technology University, Dinajpur, Bangladesh.</i>
May 20, 2014 – Aug 31, 2014	■ Lecturer . Dept. of Computer Science and Engineering, <i>Uttara University, Dhaka, Bangladesh.</i>
Mar 01, 2014 – May 19, 2014	■ Programmer . Global Info Tech System.

Education

2023 – Till Date	■ Ph.D., Deakin University Information Technology. Thesis title: <i>Enhancing Edge Data Integrity under Corrupted and Heterogeneous Servers.</i>
2016 – 2019	■ M.Sc. Computer Science and Engineering in Rajshahi University of Engineering and Technology (RUET), Rajshahi, Bangladesh Thesis title: <i>Improved Feature Selection for the Classification of Hyperspectral Images Using Mutual Information With Minimum Noise Fraction..</i>
2009 – 2012	■ B.Sc. Computer Science and Engineering in Hajee Moahammad Danesh Science and Technology University (HSTU), Dinajpur, Bangladesh Thesis title: <i>An Efficient Filtering-Based Approach Improving LSB Steganography Using Status Bit Along With AES Cryptography.</i>

Research Publications

Journal Articles

- 1 **M. R. Islam**, Y. Xiang, P. Uddin, *et al.*, “A resilient edge data integrity verification approach via robust merkle trees and steganographic transmission,” *IEEE Transactions on Cloud Computing*, pp. 1–16, May 2026. DOI: <https://doi.org/10.1109/TCC.2026.3697006>.
- 2 **M. R. Islam**, P. Uddin, Y. Xiang, K.-H. Yeh, I. Liu, and J. Kua, “Federated learning with adaptive regularization for efficient edge data corruption detection in edge intelligence,” *IEEE Transactions on Cloud Computing*, pp. 1–16, Oct. 2025.

- 3 **M. R. Islam**, Y. Xiang, P. Uddin, Y. Zhao, J. Kua, and Gao, "Multiple edge data integrity verification with multi-vendor and multi-server in mobile edge computing, longxiang," *IEEE Transactions on Mobile Computing*, pp. 1–16, Jan. 2025.
- 4 M. T. Islam, **M. R. Islam**, and M. A. Al Mamun, "Advancing hyperspectral image classification with dual branch networks and informative feature extraction," *Journal of Spatial Science*, pp. 1–35, Jun. 2024.
- 5 M. T. Islam, **M. R. Islam**, P. Uddin, and A. Ulhaq, "Spectrally segmented-enhanced neural network for precise land cover object classification in hyperspectral imagery," *Remote Sensing*, vol. 16, no. 5, Feb. 2024.
- 6 **M. R. Islam**, M. T. Islam, P. Uddin, and A. Ulhaq, "Improving hyperspectral image classification with compact multi-branch deep learning," *Remote Sensing*, vol. 16, no. 12, p. 2069, Jun. 2024.
- 7 M. A. Sahid, M. P. Uddin, H. Saha, and **M. R. Islam**, "Towards privacy-preserving alzheimer's disease classification: Federated learning on t1-weighted magnetic resonance imaging data," *Digital Health*, vol. 10, p. 20552076241295577, Nov. 2024.
- 8 M. O. Faruque, **M. R. Islam**, and M. T. Islam, "Advanced masked face recognition using robust and light weight deep learning model," *International Journal of Computer Applications*, vol. 186, no. 2, pp. 42–51, Jan. 2023.
- 9 M. T. Islam, **M. R. Islam**, M. P. Uddin, and A. Ulhaq, "A deep learning-based hyperspectral object classification approach via imbalanced training samples handling," *Remote Sensing*, vol. 15, no. 14, p. 3532, May 2023.
- 10 **M. R. Islam**, B. Ahmed, M. A. Hossain, and M. P. Uddin, "Mutual information-driven feature reduction for hyperspectral image classification," *Sensors*, vol. 23, no. 2, p. 657, Jan. 2023.
- 11 **M. R. Islam**, M. T. Islam, and M. P. Uddin, "Improving hyperspectral image classification through spectral-spatial feature reduction with a hybrid approach and deep learning," *Journal of Spatial Science*, pp. 1–18, Jun. 2023.
- 12 **M. R. Islam**, A. Siddiqua, M. Ibn Afjal, M. P. Uddin, and A. Ulhaq, "Hyperspectral image classification via information theoretic dimension reduction," *Remote Sensing*, vol. 15, no. 4, p. 1147, Feb. 2023.
- 13 A. Siddiqua, **M. R. Islam**, and M. I. Afjal, "Spectral segmentation based dimension reduction for hyperspectral image classification," *Journal of Spatial Science*, vol. 68, no. 4, pp. 543–562, May 2022.
- 14 Z. B. Zakaria and **M. R. Islam**, "Hybrid 3dnet: Hyperspectral image classification with spectral-spatial dimension reduction using 3d cnn," *International Journal of Computer Applications*, vol. 975, p. 8887, Jul. 2022.
- 15 **M. R. Islam**, A. Siddiqua, and N. Tasnim, "An efficient dimensionality reduction method for the classification of satellite remote sensing hyperspectral images," *International Journal of Computer Applications*, vol. 975, p. 8887, Jul. 2021.
- 16 **M. R. Islam**, B. Ahmed, and A. Hossain, "Feature reduction of hyperspectral image for classification," *Journal of Spatial Science*, vol. 67, no. 2, pp. 331–351, Jun. 2020.
- 17 **M. R. Islam**, T. Tanni, S. Parvin, M. Sultana, and A. Siddiqua, "A modified lsb image steganography method using filtering algorithm and stream of password," *Information Security Journal: A Global Perspective*, vol. 30, no. 6, pp. 359–370, Nov. 2020.
- 18 P. Basak, L. Arjuman, A. M. Nitu, *et al.*, "A modified blind steganalysis method based on the moments of characteristic function," *HBRP Advancement in Software Engineering and Testing*, vol. 1, no. 2, pp. 1–9, Apr. 2018.
- 19 S. Sultana, A. Khanam, **M. R. Islam**, *et al.*, "A modified filtering approach of lsb image steganography using stream builder along with aes encryption," *HBRP recent trends in information technology and its applications*, vol. 1, no. 2, pp. 1–10, Feb. 2018.

- 20 S. K. Roy, A. K. Ghosh, A. S. Asa, M. P. Uddin, **M. R. Islam**, and M. I. Afjal, "Bengali consonants-voice to text conversion using machine learning tool," *International Journal of Research in Computer Engineering and Electronics*, vol. 6, no. 1, Jun. 2017.
- 21 M. Sohrawordi, M. Hossen, M. P. Uddin, A. M. Nitu, and **M. R. Islam**, "Android-based walking assistant for blind and low-vision people suggesting the shortest path using floyd-warshall algorithm," *Journal of Innovation and Development Strategy*, vol. 9, no. 2, Feb. 2015.
- 22 M. Nadim, S. M. Billah, M. S. Alam, A. K. Mandal, M. P. Uddin, and **M. R. Islam**, "Cross-user source-based data deduplication in distributed system without violating data privacy of individual user," *International Journal of Research in Computer Engineering and Electronics (IJRCEE)*, vol. 3, no. 6, Jan. 2014.

Conference Proceedings

- 1 S. R. Rahman, **M. R. Islam**, and A. Chakraborty, "Seeing the world in dots: A machine learning adventure in colorblind perception," in *2024 IEEE International Conference on Computing, Applications and Systems (COMPAS)*, 2024, pp. 1–6.
- 2 M. A. Sahid, H. Saha, **M. R. Islam**, and M. Palash Uddin, "Enhancing parallelism in cross-silo federated learning for brain disease classification," in *2024 IEEE International Conference on Computing, Applications and Systems (COMPAS)*, 2024, pp. 1–6. DOI: 10.1109/COMPAS60761.2024.10796496.
- 3 A. Bhuyainand, J. Ferdouse, M. Babarand, M. Sohrawordi, **M. R. Islam**, and E. Ali, "An efficient feature optimization approach with machine learning for detection of major depressive disorder using eeg signal," in *26th International Conference on Computer and Information Technology (ICCIT 2023)*, 2023, pp. 1–6.
- 4 A. Chakraborty, S. R. Rahman, M. T. Islam, **M. R. Islam**, and M. A. Al Mamun, "A machine learning algorithm to detect alzheimer's disease using mri images," in *6th International Conference on Electrical Information and Communication Technology (EICT 2023)*, 2023, pp. 1–6.
- 5 T. Hasan, M. L. Ali Liton, M. H. Rahman, M. T. Islam, and **M. R. Islam**, "Segmentation-based dimensionality reduction for hyperspectral image classification," in *6th International Conference on Electrical Information and Communication Technology (EICT 2023)*, 2023, pp. 1–6.
- 6 M. T. Islam and **M. R. Islam**, "Crossover dimensionality reduction and multi-branch deep learning for enhanced hyperspectral image classification," in *6th International Conference on Electrical Information and Communication Technology (EICT 2023)*, 2023, pp. 1–6.
- 7 **M. R. Islam**, M. T. Islam, and M. Sohrawordi, "Selective hybridnet: Spectral-spatial dimensionality reduction for hsi classification," in *2023 International Conference on Electrical, Computer and Communication Engineering (ECCE)*, IEEE, 2023, pp. 1–5.
- 8 A. B. Rahman, M. T. Islam, **M. R. Islam**, M. Sohrawordi, and M. N. Sultan, "Enhanced brain tumor classification from mri images using deep learning model," in *26th International Conference on Computer and Information Technology (ICCIT 2023)*, 2023, pp. 1–6.
- 9 S. R. Rahman, A. Chakraborty, **M. R. Islam**, M. T. Islam, and M. A. Al Mamun, "A machine learning algorithm to detect alzheimer's disease using mri images," in *6th International Conference on Electrical Information and Communication Technology (EICT 2023)*, 2023, pp. 1–6.
- 10 M. T. Islam, M. Kumar, and **M. R. Islam**, "Mc-net: Spectral-spatial feature reduction for hyperspectral image classification with optimized technique series," in *2022 4th International Conference on Electrical, Computer and Telecommunication Engineering (ICECTE)*, IEEE, 2022, pp. 1–4.
- 11 M. T. Islam, M. Kumar, **M. R. Islam**, and M. Sohrawordi, "Spectral-spatial feature reduction for hyperspectral image classification with optimized technique series," in *2022 12th International Conference on Electrical and Computer Engineering (ICECE)*, IEEE, 2022, pp. 256–259.

- 12 M. T. Islam, M. Kumar, **M. R. Islam**, and M. Sohrawordi, "Subgrouping-based nmf with imbalanced class handling for hyperspectral image classification," in *2022 25th International Conference on Computer and Information Technology (ICCIT)*, IEEE, 2022, pp. 739–744.
- 13 **M. R. Islam** and B. Ahmed, "Spectral–spatial dimensionality reduction for hyperspectral image classification," in *2022 25th International Conference on Computer and Information Technology (ICCIT)*, IEEE, 2022, pp. 282–287.
- 14 U. A. M. E. Ali, M. A. Hossain, and **M. R. Islam**, "Analysis of pca based feature extraction methods for classification of hyperspectral image," in *2019 2nd International Conference on Innovation in Engineering and Technology (ICIET)*, 2019, pp. 1–6.
- 15 **M. R. Islam**, B. Ahmed, and M. A. Hossain, "Feature reduction based on segmented principal component analysis for hyperspectral images classification," in *2019 International Conference on Electrical, Computer and Communication Engineering (ECCE)*, 2019, pp. 1–6.
- 16 A. Siddiqua, M. Ibn Afzal, **M. R. Islam**, and A. Mahjabin Nitu, "Spectral subset detection for hyperspectral image classification," in *2019 2nd International Conference on Innovation in Engineering and Technology (ICIET)*, 2019, pp. 1–6.
- 17 **M. R. Islam**, A. Siddiqua, M. P. Uddin, A. K. Mandal, and M. D. Hossain, "An efficient filtering based approach improving lsb image steganography using status bit along with aes cryptography," in *2014 International Conference on Informatics, Electronics and Vision (ICIEV)*, 2014, pp. 1–6.

Books and Chapters

- 1 M. T. Islam, M. Kumar, and **M. R. Islam**, *Spectral–Spatial Feature Reduction for Hyperspectral Image Classification*. 2022, pp. 564–577.
- 2 **M. R. Islam**, M. Ali Hossain, and B. Ahmed, *Improved subspace detection based on minimum noise fraction and mutual information for hyperspectral image classification*. Jul. 2020, pp. 631–641.

Skills

Languages	Strong reading, writing and speaking competencies in English, and Bangla.
Coding	Python, Matlab, Java, PHP, SQL, $\text{\LaTeX}$,
Databases	MySQL, and SQL
Web Dev	HTML, CSS, JavaScript, Apache Web Server.
Misc.	Academic research, teaching, training, consultation, $\text{\LaTeX}$ typesetting and publishing.

Miscellaneous Experience

Awards and Achievements

2023	- Best Paper Award, 6th International Conference on Electrical Information and Communication Technology (EICT 2023). - Deakin University Postgraduate Research Scholarship (DUPRS), Deakin University, Melbourne, Australia (2023-Ongoing).
2022	Best Presentation Awards, IRT Project Presentation, CSE Faculty (Fiscal Year: 2021-2022), Hajee Mohammad Danesh Science and Technology University, Dinajpur, Bangladesh.
2011	UGC Merit Scholarship, University Grants Commission, Dhaka, Bangladesh.
2010–2012	Dean's List Award: For each of the last 03 undergrad years, Hajee Mohammad Danesh Science and Technology University (HSTU), Dinajpur-5200, Bangladesh.

Miscellaneous Experience (continued)

- 2007  **Higher Secondary School Certificate (HSC) Merit Scholarship**, Bangladesh Education Board.
- 2005  **Secondary School Certificate (SSC) Merit Scholarship**, Bangladesh Education Board.
- 1999  **Primary Merit Scholarship**, Directorate of Primary Education, Bangladesh.

Talks

- IEEE ICCIT, 2022  25th International Conference on Computer and Information Technology (IC-CIT), December 17-19, 2022, Cox's Bazar, Bangladesh.
- IEEE ICIET, 2019  IEEE International Conference on Innovation in Engineering and Technology (ICIET), DU, Dhaka, Bangladesh.
- IEEE ECCE, 2019  International Conference on Electrical, Computer and Communication Engineering (ECCE), Long Beach Hotel, Cox's Bazar, Bangladesh.
- Springer IJCCA, 2018  International Joint Conference on Computational Intelligence. Algorithms for Intelligent Systems, DIU, Dhaka, Bangladesh.
- IEEE ICIEV, 2014  IEEE International Conference on Informatics, Electronics and Vision, Dhaka, DU, Dhaka, Bangladesh.

References

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Dr. Palash Uddin

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