

CURRICULUM VITÆ

Engr. Muhammad Kamal Hossen
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Chattogram-4349, Bangladesh.

A. Contact Information

Associate Professor
Dept. of Computer Science & Engineering (CSE)
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B. Academic Qualifications

Year	Institution	Degree	Division/Class	Marks/CGPA
2015	Chittagong University of Engineering & Technology (CUET)	M. Sc. in CSE	First Class	3.50 out of 4.0
2005	Chittagong University of Engineering & Technology (CUET)	B. Sc. in CSE	First Class	3.74 out of 4.0 (Merit Position: 3rd)
1998	Chittagong College, Chittagong	H.S.C.	First	743
1996	Shakpura Model High School Boalkhali, Chittagong	S.S.C.	First*	840

C. Teaching

Undergraduate Courses:

- Computer Basics & Programming (C)
- Object Oriented Programming (C++ & Java)
- Microprocessors & Assembly Language Programming
- Applied Statistics & Queuing Theory
- Operating Systems
- Computer Peripherals & Interfacing
- Software Engineering
- Data Structures
- Neural Networks & Fuzzy Logic
- Database Management Systems

- Computer Graphics
- Data Communication
- Computer Architecture & Organization
- Digital Image Processing
- Pattern Recognition
- Artificial Intelligence
- Numerical Analysis
- Algorithm Design & Analysis

D. Research Areas and Interests

- Digital Image Processing
- Computer Vision
- Pattern Recognition
- Data Mining

E. Professional Experiences

Full Time

March, 2006 to Present

- **Associate Professor**, Dept. of Computer Science and Engineering, Chittagong University of Engineering & Technology (CUET), Chittagong-4349, Bangladesh.

Period: August 28, 2018 - till to date

- **Assistant Professor**, Dept. of Computer Science and Engineering, Chittagong University of Engineering & Technology (CUET), Chittagong-4349, Bangladesh.

Period: April 07, 2010 - August 27, 2018

- **Lecturer**, Dept. of Computer Science and Engineering, Chittagong University of Engineering & Technology (CUET), Chittagong-4349, Bangladesh.

Period: March 23, 2006 - April 06, 2010

Visiting Faculty

- University of Science and Technology Chittagong (USTC), Bangladesh
- International Islamic University Chittagong (IIUC), Bangladesh
- University of Information Technology and Sciences (UITS), Chattogram, Bangladesh
- Institute of Chartered Accountants of Bangladesh (ICAB), Chattogram, Bangladesh
- East Delta University (EDU), Chattogram, Bangladesh
- Southern University Bangladesh (SUB), Chattogram, Bangladesh
- Bangladesh Computer Council (BCC), Chattogram, Bangladesh

F. Research Experiences

Ph.D. Research Student

June, 2016 to Present

Dept. of Computer Science and Engineering,
Chittagong University of Engineering & Technology (CUET)
Supervisor: Prof. Dr. Mohammad Shamsul Arefin

Research Assistant (M.Sc. Engg. Student)

April, 2011 to October, 2015

Dept. of Computer Science and Engineering,
Chittagong University of Engineering & Technology (CUET)
Supervisor: Prof. Dr. Kaushik Deb

Research Assistant (B.Sc. Engg. Student)

January, 2001 to November, 2005

Dept. of Computer Science and Engineering,
Chittagong University of Engineering & Technology (CUET)
Supervisor: Prof. Dr. Kaushik Deb

G. Publications

Journal Articles:

1. **Muhammad Kamal Hossen**, Mohammad Obaidur Rahman, Anika Sadia, Md. Shahnur Azad Chowdhury, “Zebra Crossing Detection Based on HSV Colour Model and Projective Invariant for Driver Assistance System”, International Journal of Applied Pattern Recognition (IJAPR), Vol. 6, No. 1, Pp. 1-14, Inderscience Publishers Ltd., 2019. (ESCI Indexed)
2. Mohammad Obaidur Rahman, Md. Sabir Hossain, Ta-Seen Junaid, Md. Shafiul Alam Forhad, and **Muhammad Kamal Hossen**, “Predicting Prices of Stock Market using Gated Recurrent Units (GRUs) Neural Networks”, International Journal of Computer Science and Network Security (IJCSNS), Vol. 19, No. 1, Pp. 213-222, January, 2019. (ESCI Indexed)
3. Mohammad Obaidur Rahman, **Muhammad Kamal Hossen**, Md. Golam Morsad, Animesh Chandra Roy, and Md. Shahnur Azad Chowdhury, “An Approach for Enhancing Security of Cloud Data using Cryptography and Steganography with E-LSB Encoding Technique”, International Journal of Computer Science and Network Security (IJCSNS), Vol. 18, No. 9, Pp. 85-93, September, 2018. (ESCI Indexed)
4. Shudipta Sharma, **Muhammad Kamal Hossen**, Md. Sajjatul Islam, Md. Shahnur Azad Chowdhury, and Md. Jiabul Hoque, “Automatic Question and Answer Generation from Bengali and English Texts”, GESJ: Computer Science and Telecommunications, No.2(54), Pp. 76-90, June, 2018.
5. **Muhammad Kamal Hossen**, Md. Nura Alam Siddiquee, Animesh Chandra Roy, and Md. Shahnur Azad Chowdhury, “A Video-Based Vehicle Detection and

Classification System Using Cascade Haar Classifier”, Southeast-Asian Journal of Sciences (SAJS), Vol. 6, No. 1, Pp. 56-65, June, 2018.

6. **Muhammad Kamal Hossen**, Md. Khyrul Bashar, and Animesh Chandra Roy, “Development of A PDF Debugger Using Apache PDFBox”, International Journal of Electronics & Informatics (IJEI), June, 2018. [*Accepted*]
7. **Muhammad Kamal Hossen**, Animesh Chandra Roy, Md. Shahnur Azad Chowdhury, Md. Sajjatul Islam, and Kaushik Deb, “License Plate Detection and Recognition System based on Morphological Approach and Feed-Forward Neural Network”, International Journal of Computer Science and Network Security (IJCSNS), Vol. 18, No. 5, Pp. 36-45, May, 2018. (ESCI Indexed)
8. **Muhammad Kamal Hossen**, Supriya Sarker, and Md. Shahnur Azad Chowdhury, “Hybrid Digital Watermarking Scheme Based on Discrete Wavelet Transform for Copyright Protection”, Advancement in Image Processing and Pattern Recognition (AIPPR), Vol. 1, No. 2, Pp. 1-10, 2018.
9. **Muhammad Kamal Hossen**, Arifa Sultana, Md. Shahnur Azad Chowdhury, and Md. Sajjatul Islam, “Road Sign Recognition Based on Shape and Color Using SURF Method for Driver Assistance System”, International Journal of Advanced Science and Technology (IJAST), Vol. 115, Pp. 75-86, June, 2018. (SCOPUS Indexed)
10. **Muhammad Kamal Hossen**, Monazil Hoque Chowdhury, and Intakhab Alam Chowdhury, “Fire Detection from Video based on Temporal Variation, Temporal Periodicity and Spatial Variance Analysis”, International Journal of Engineering, Science and Mathematics (IJESM), Vol. 7, Issue 2, Pp. 359-368, February, 2018.
11. **Muhammad Kamal Hossen**, Md. Ali Faiad, Md. Shahnur Azad Chowdhury, and Md. Sajjatul Islam, “Discovering Users Topic of Interest from Tweet”, International Journal of Computer Science & Information Technology (IJCSIT), Vol. 10, No. 1, Pp. 95-105, January, 2018.
12. **Muhammad Kamal Hossen**, and Kaushik Deb, “Vehicle License Plate Detection and Tilt Correction Based on HSI Color Model and SUSAN Corner Detector”, Smart Computing Review (SmartCR), Vol. 4, No. 5, Pp. 371-388, South Korea, October, 2014.
13. M. A. Islam, **M. K. Hossen**, and M. S. A. Chowdhury, ” An Efficient Method of Optical Character Recognition System for Bangla Numerals using Fuzzy Logic”, Computer Science and Engineering Research Journal(CSERJ), Vol.-06, Pp. 68-80, Bangladesh, 2009-2010.
14. M. M. Rahman, M. A. Islam, and **M. K. Hossen**,”Upper Leg and Knee Design for a Humanoid Walking Robot”, Computer Science and Engineering Research Journal (CSERJ), Bangladesh, Vol.-06, Page No: -81-89, 2009-2010.
15. Mohammad Ibrahim Khan, **Muhammad Kamal Hossen**, and Md. Sabbir Ali, “Cell Segmentation from Cellular Image”, Global Journal of Computer Science and

Technology (GJCST), Vol. 10, Issue 13 (Ver. 1.0), Page No: 55-60, India, October, 2010.

16. M. T. Alam, **M. K. Hossen**, A. S. M. Kayes and M. F. Kader, "Globular Sampling with Image Enhancement for Fingerprint Verification", Computer Science and Engineering Research Journal, Bangladesh, Vol.-05, Page No:-50-56, 2008.
17. A. S. M. Kayes, T. Chowdhury, **M. K. Hossen**, M. S. Kowsar, and B. M. Solaiman, "Password, Fingerprint and PKI based Authentication for 4G Mobile Network", Computer Science and Engineering Research Journal, Bangladesh, Vol.-05, Page No:-32- 38, 2008.
18. M. F. Kader, **M. K. Hossen**, Asaduzzaman and A. S. M. Kayes, "An Off-line Handwritten Signature Verification System as a Knowledge Base", Computer Science and Engineering Research Journal, Bangladesh, Vol.-04, Page No:-50-55, 2006.
19. N. K. Chowdhury, R. U. Faruqui, and **M. K. Hossen**, "Approximate Travel Time Measure from Moving Object Trajectory in Road Network", Computer Science and Engineering Research Journal, Bangladesh, Vol.-04, Page No: 20-28, 2006.

Conference Papers:

1. Saika Zaman, Ahmed Imteaj, **Muhammad Kamal Hossen**, and Mohammad Shamsul Arefin, "IoT-Enabled Lifelogging Architecture Model to Leverage Healthcare Systems", 3rd International Conference on Intelligent Computing and Optimization (ICO), Thailand, 2020. Advances in Intelligent Systems and Computing, Vol. 1324, Pp. 1011-1025, Springer, 2021.
2. Ratul Bhowmick, Md. Ibrahim Sadek Bhuiyan Mobin, Md. Sabir Hossain, **Muhammad Kamal Hossen**, and Ahsan Sadee Tanim, "An Approach for Improving the Complexity of Longest Common Subsequence Problems using Queue and Divide-and-Conquer Method", 1st International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT), Dhaka, Bangladesh, 3-5 May, 2019.
3. Md. Sabir Hossain, Md. Rakibul Islam, **Muhammad Kamal Hossen**, Maliha Zahan Chowdhury, and Kaniz Fatima Tonni, "Plagiarism Detection of the Students' Submitted Code", 6th International Conference on Natural Science and Technology (ICNST), Chattogram, Bangladesh, 29-30 March, 2019.
4. Jesmin Akter, **Muhammad Kamal Hossen**, and Md. Shahnur Azad Chowdhury, "Bangladeshi Paper Currency Recognition System using Supervised Learning", International Conference on Computer, Communication, Chemical, Materials and Electronic Engineering (IC4ME2), Rajshahi, Bangladesh, 08-09 February, 2018.
5. Nusrath Jahan, **Muhammad Kamal Hossen**, and Muhammad Kamrul Hossain Patwary, "Implementation of a Vehicle Tracking System using Smartphone and SMS Service", The 4th International Conference on Advances in Electrical Engineering (ICAEE), Dhaka, Bangladesh, 28-30 September, 2017.

6. Zainal Abedin, Prashengit Dhar, **Muhammad Kamal Hossen**, and Kaushik Deb, "Traffic Sign Detection and Recognition Using Fuzzy Segmentation Approach and Artificial Neural Network Classifier Respectively", IEEE International Conference on Electrical, Computer and Communication Engineering (ECCE), Cox's Bazar, Bangladesh, 16-18 February, 2017.
7. Nuzhat Tabassum, **Muhammad Kamal Hossen**, Sujan Chowdhury and Salah Uddin Mondal, "An Approach to Recognize Book Title from Multi-Cell Book Shelf Images", IEEE International Conference on Imaging, Vision & Pattern Recognition (icIVPR), Dhaka, Bangladesh, 13-14 February, 2017.
8. Animesh Chandra Roy, **Muhammad Kamal Hossen**, and Debashis Nag, "License Plate Detection and Character Recognition System for Commercial Vehicles based on Morphological Approach and Template Matching", 3rd IEEE International Conference on Electrical Engineering and Information & Communication Technology (iCEEICT), Dhaka, Bangladesh, 22-24 September, 2016.
9. **Muhammad Kamal Hossen**, and Sabrina Hoque Tuli, "A Surveillance System Based on Motion Detection and Motion Estimation using Optical Flow", 5th IEEE International Conference on Informatics, Electronics & Vision (ICIEV), Dhaka, Bangladesh, May, 2016.
10. **Muhammad Kamal Hossen**, and Afiya Ayman, "JRanker: An Approach to Evaluate the Prestige of a Journal Using PageRank and Alexa Rank along with Impact Factor", 1st International Conference on Information and Communication Technology (ICAICT), Chittagong, May, 2016.
11. Kaushik Deb, **Muhammad Kamal Hossen**, Muhammad Ibrahim Khan and Mohammad Rafiqul Alam, "Bangladeshi Vehicle License Plate Detection Method Based on HSI Color Model and Geometrical Properties", 7th International Forum on Strategic Technology (IFOST), Pp. 687-691, Russia, September, 2012.
12. Haosong Gou, Md. Kafil Uddin, and **Muhammad Kamal Hossen**, "An Agent-based Cooperative Communication Method in Wireless Sensor Network for Port logistics", 13th IEEE International Conference on Computer & Information Technology (ICCIT), Page No:-494-499, Dhaka, December, 2010.
13. Md. Kafil Uddin, and **Muhammad Kamal Hossen**, "A Safe System with Safe Logistics Support for Chittagong Port", 13th IEEE International Conference on Computer & Information Technology (ICCIT), Page No:-347-351, Dhaka, December, 2010.
14. Md. Moshikul Hoque, **Md. Kamal Hossen**, Mir Md. Saki Kowsar, Kaushik Deb, Md. Shamsul Arefin, "An Empirical Framework for Network Intrusion Detection using Fuzzy Logic", 9th International Conference on Computer & Information Technology (ICCIT), Pp. 392-397, Dhaka, 2006.

H. Project Experiences

1. “Implementation of Automatic Vehicle License Plate Detection and Recognition System” - Funded by Directorate of Research & Extension (DRE), CUET, Chittagong-4349, Bangladesh.
2. “Self-Assessment of the B.Sc. in Computer Science and Engineering Program of CUET” - Funded by Higher Education Quality Enhancement Project (HEQEP), University Grants Commission (UGC), Bangladesh.

I. Reviewers

1. 2021 1st International Conference on Big Data, IoT and Machine Learning (BIM-2021)
2. 2021 1st International Conference on Sustainable Development in Technology for 4th Industrial Revolution (ICSDTIR-2021)
3. 2019 IEEE 2nd International Conference on Electrical, Computer and Communication Engineering (ECCE-2019)
4. 2017 IEEE 1st International Conference on Electrical, Computer and Communication Engineering (ECCE-2017)
5. 2014 IEEE 9th International Forum on Strategic Technology (IFOST-2014)
6. 2013 1st National Conference on Intelligent Computing & Information Technology (NCICIT-2013)

J. Members

1. Associate Member, The Institution of Engineers, Bangladesh (IEB) 2006 - 2007
2. Member, The Institution of Engineers, Bangladesh (IEB) 2008 - 2018
3. Fellow, The Institution of Engineers, Bangladesh (IEB) 2019 - Present
4. Member, Self-Assessment Committee (SAC), Dept. of CSE, CUET [*Sub-project under the Higher Education Quality Enhancement Project (HEQEP) of University Grants Commission (UGC) of Bangladesh*]

K. References

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