Arifa Islam Champa

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Education

M. Sc.(Engg) in Computer Science & Engineering, 2019 - Present
Islamic University of Technology (IUT)

B. Sc.(Engg) in Computer Science & Engineering, 2013 - 2017
Rajshahi University of Engineering & Technology (RUET)
Thesis: Comparative Analysis of Effective Subspace Detection Techniques for Hyperspectral Image Classification
CGPA: 3.73/4.00 (8^{th} among 117 students)

Experience

Lecturer *3 September, 2018 - Present*
Department of Computer Science & Engineering
Bangladesh Army International University of Science & Technology (BAIUST)

Publications

1. **A. I. Champa**, M. F. Rabbi, S. M. Mahedy Hasan, A. Zaman and M. H. Kabir, "Tree-Based Classifier for Hyperspectral Image Classification via Hybrid Technique of Feature Reduction," International Conference on Information and Communication Technology for Sustainable Development **(ICICT4SD), 2021.**
2. M. F. Rabbi, S. M. M. Hasan, **A. I. Champa**, M. R. Hossain and M. A. Zaman, A Convolutional Neural Network Model for Screening COVID-19 Patients Based on CT Scan Images, accepted at International Conference on Big Data, IoT and Machine Learning **(BIM 2021)**.
3. S. M. Mahedy Hasan, M. F. Rabbi, **A. I. Champa** and M. A. Zaman, Machine Learning Based Models for Predicting Autism Spectrum Disorders, accepted at International Conference on Big Data, IoT and Machine Learning **(BIM 2021)**.
4. M. F. Rabbi, S. M. M. Hasan, **A. I. Champa** and M. A. Zaman, "A Convolutional Neural Network Model for Early-Stage Detection of Autism Spectrum Disorder," International Conference on Information and Communication Technology for Sustainable Development **(ICICT4SD), 2021.**
5. S. M. M. Hasan, M. F. Rabbi, **A. I. Champa** and M. A. Zaman, "A Comparative Study of Classification Approaches for COVID-19 Prediction," International Conference on Information and Communication Technology for Sustainable Development **(ICICT4SD), 2021.**
6. **A. I. Champa**, S. M. M. Hasan, M. A. Rahman and M. F. Rabbi, "Hybrid Technique for Classification of Hyperspectral Image Using Quadratic Mutual Information", IEEE Region 10 Symposium **(TENSYMP), Dhaka, Bangladesh, 2020**, pp. 933-936.
7. S. M. M. Hasan, M. F. Rabbi, **A. I. Champa** and M. A. Zaman, "A Machine Learning-Based Model for Early Stage Detection of Diabetes", 23rd International Conference on Computer and Information Technology **(ICCIT), 19-21 December 2020** Dhaka, Bangladesh.

8. S. M. M. Hasan, M. F. Rabbi, **A. I. Champa** and M. A. Zaman, "An Effective Diabetes Prediction System Using Machine Learning Techniques", 2nd International Conference on Advanced Information and Communication Technology **(ICAICT), 28-29 November 2020**, Dhaka, Bangladesh..

9. M. F. Rabbi, S. M. M. Hasan, **A. I. Champa**, M. A. Zaman and M. K. Hasan, "Prediction of Liver Disorders using Machine Learning Algorithms: A Comparative Study", 2nd International Conference on Advanced Information and Communication Technology **(ICAICT), 28-29 November 2020**, Dhaka, Bangladesh.

10. **A. I. Champa**, M. F. Rabbi and N. Banik, "Improvement in Hyperspectral Image Classification by Using Hybrid Subspace Detection Technique", 2019 International Conference on Sustainable Technologies for Industry 4.0 **(STI), Dhaka, Bangladesh, 2019**, pp. 1-5.

Honours & Scholarships

Participant, National Girls Programming Contest 2017
Participant, ICPC (Dhaka Region) 2015
Participant, RUET DAY Programming Contest 2013
Voice of RUET, Inter RUET Debate Compitition 2013
University Stipend 2013 - 2017
Secondary School Certificate (SSC) Scholarship 2010

Skills

Programming Languages: Java, C, C++, Python, MATLAB, SQL, Assembly.
Web Programming: HTML, CSS, PHP, Javascript.
IDE: Anaconda, CodeBlocks, Xampp, Eclipse.
Frameworks: PyTorch, TensorFlow.
Familiar OS: Windows, Ubuntu.
Hands on: CISCO Packet Tracer, Latex, OpenGl, Oracle.
Communication: Bangla(Native Proficiency), English(Full Professional Proficiency).
Personal: Good analytical & writing skill, problem solving.

Projects

Bus Ticket Management 2016

Bus Ticket Management was developed on Android platform using Java with the feature of online ticket booking or buying of specific route of various buses.

Semester Guideline 2015

Semester guideline is a web application designed using CSS, HTML, PHP and MySQL database. The features include posting status,commenting, profile updating, file updating , image sharing and log-in option with verified email.

Save Girls 2013

Save Girls is an Android application that can send location to a specific person if the victim presses a button.

Extra Curricular Activities

President, *NIROB (Nirapod Rokter Bondhon)* 2013 - 2017
Founding Member, *RCF(Ruet Career Forum)* 2015 - 2017
Vice-President, *NARS (Narsingdi Associasion of RUET Student)* 2013 - 2017
Volunteer, *National High School Programming Contest (NHSPC)* March'16
Volunteer, *National Collegiate Programming Contest(NCPC)* September'15

Training

Advances in Computer Vision: Recent Trends and Application 09-12 December'19
Islamic University of Technology

Top-Up IT Training (Java) April'17 - December'17
Bangladesh Computer Council (BCC)

Mentorship & Services

Batch Coordinator *Fall'21- Present*
Dept. of CSE (13th Batch), BAIUST
Member *September'21- Present*
Industrial Attachment Team (CSE), BAIUSTS
Program Coordinator *October'20- September'21*
Dept. of CSE, BAIUST
Batch Coordinator *Spring'19- Spring'20*
Dept. of CSE (6th Batch), BAIUST
Co-advisor *Fall'18- Fall'19*
BAIUST Computer Club

Teaching

Conducted Courses:

- CSE-101: Computer Fundamental and Basic Programming
- CSE-102: Computer Fundamental and Basic Programming Sessional
- CSE-109: Computer Programmming
- CSE-110: Computer Programmming Sessional
- CSE-203: Data Structures
- CSE-204: Data Structures Sessional
- CSE-215: Algorithms
- CSE-216: Algorithms Sessional
- CSE-313: Applied Statistics
- CSE-411: VLSI Design
- CSE-412: VLSI Design Sessional