SABBIR AHMED

RESEARCH INTEREST

Algorithms, Data Structures, Artificial Intelligence, Neural Network, Software Engineering, Blockchain & Security

EDUCATION

B.SC. IN INFORMATION TECHNOLOGY

Institute of Information Technology, Jahangirnagar University

2017-2022

CGPA 3.63

IELTS: 7.5   L: 8, R: 9, S: 6.5, W:6.5

CONTACT

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🌐 Personal Website

SKILLS

COMPETITIVE PROGRAMMING

PROBLEM SOLVING

MACHINE LEARNING & AI

ROBOTICS

IOT & MICROCONTROLLER

GRAPHICS DESIGN & UI/UX

WEB DEVELOPMENT

IMAGE PROCESSING

BLOCKCHAIN & SECURITY

EXPERINCE

KING ABDULAZIZ UNIVERSITY,JEDDAH, SAUDI ARABIA

2022 - PRESENT

RESEARCH ASSOCIATE

Research conducting on depression analysis as well as multimodal detection in an online automated test environment. The goal of this research is to combine known symptoms, and then compress them into a web application which can be used by anyone.

WAZED MIAH SCIENCE RESEARCH CENTRE JAHNAGIRNAGAR UNIVERSITY

2021 - PRESENT

RESEARCH ASSISTANT

Working on the DIVERSASIA Project, funded by European Union. This project aims to making accessible HE OERs (Open Education Resources) and MOOCs (Massive Open Online Courses), and personalisation using AI (Artificial Intelligence).

INSTITUTE OF INFORMATION TECHNOLOGY, JAHNAGIRNAGAR UNIVERSITY

2019 - 2022

TEACHING ASSISTANT

Assess more than 300 students of 7 courses. Taken Electronics & Electrical Circuit, electronic devices and circuit & Digital Logic Design Courses with labworks

CP COMMUNITY, IIT, JU

2019 - PRESENT

TRAINER

I have trained juniors on Algorithms and Data Structures, coordinated weekly contests and arranged problem solving classes.

AFFILIATION

IEEE Student Branch, Jahangirnagar University	CHAIRPERSON	2021 - PRESENT
	VICE-CHAIR	2019 - 2021
	JOINT SECRETARY	2018 - 2019
TCCE 2020 Conference	GRAPHICS & PROMOTION LEAD	

ACHIEVEMENTS

ONSITE PROGRAMMING CONTESTS	**2nd Runners Up** (IEEEXtreme 14.0 - 2020, Jahangirnagar University, Bangladesh), Team- JuPsychosocial
	2nd Runners Up (IEEEXtreme 13.0 - 2019, Jahangirnagar University, Bangladesh), Team-CGPAisProbabilistics
ONLINE PROGRAMMING CONTESTS	-**Top 9.1%,** 121th (ICPC Dhaka Regional 2020 Online Preliminary Contest), Team- JU_ Viva-La-Vida
	-**Top 9..2%**, 178th (ACM ICPC Dhaka Regional Online Preliminary Contest, 2018), Team- JU_Maverick
SOLVED MORE THAN **600** PROGRAMMING PROBLEMS IN VARIOUS ONLINE JUDGES	Codeforces Rating - 1618 (max) (handle: 10_01)
	Codechef Rating - 1720 (max) (handle: s__s)
	Also participated in more than 100 online contests
CHAMPION	Project Presentation, 2nd JUSC National Fest, Bangladesh
5TH POSITION	Line follower Race, Techinval18, KUET, Bangladesh
WINNER	Logo Design Contest 2018, IEEE WIE AG JU SB

PROJECTS

A Comparison in AC Compressor Control System using ANFIS and ANN with specific area based IoT sensor data to measure the lifespan of compressor

Train adaptive neuro-fuzzy inference system or (ANFIS) Artificial Neural Network (ANN) using different membership function and cluster data with private dataset.

Intrusion Detection System in smart cities

A LSTM based intrusion detection system which can detect attacks like Brute Force FTP, Brute Force SSH, DoS, DDoS, Heartbleed, Web Attack etc.

Effect of K-means Clustering on synthetic-datasets Using Different Distance Measure Technique and objective functions

A comparison k-means algorithms on synthetic data with alternative distance measure namely Distance Measurement: euclidean, squared euclidean, manhattan, chebyshev, canberra, chi-square.

CP Tracker: A Competitive Programmer's Tool

CP Tracker is a website that keeps track of a user's problem-solving progress. There are problems, contests of several online judges, and a leaderboard available. This is performed by utilizing public APIs made available by online judges.

Water Quality & Consumption Monitoring Dashboard

IoT based water metering and usages informtaion . Collects metering & quality information from the water source inlets (designed to be compatable with existing distribution system of Dhaka WASA. A project funded by world bank.

Smart Waste Bin

It autonomously opens and closes its lid, displays the garbage percentage through IoT, and can move to a predefined location while avoiding obstructions using ultrasonic sensors

PUBLICATIONS

- **S Ahmed**, M Hossain, SB Nur, M Shamim Kaiser, and M Mahmud. "Toward Machine Learning-Based Psychological Assessment of Autism Spectrum Disorders in School and Community." In Proceedings of Trends in Electronics and Health Informatics, pp. 139-149. Springer, Singapore, 2022.

- MA Khatun, MA Yousuf, **S Ahmed,** MZ Uddin, SA Alyami, S Al-Ashhab, and MA Moni. "Deep CNN-LSTM with self-attention model for human activity recognition using wearable sensor." IEEE Journal of Translational Engineering in Health and Medicine 10, 2022

- **S Ahmed,** SB Nur, F Hossain, MS Kaiser, M Mahmud, T Chen. "Computational Intelligence in Detection and Support of Autism Spectrum Disorder." In Artificial Intelligence in Healthcare, pp. 179-197. Springer, Singapore, 2022.

- **S Ahmed**, M Mahzabin, S Shahpar, SI Tonni, and M Rahman. "Assessment of Water Quality in Smart City Environment Leveraging ML-IoT." In Proceedings of International Conference on Fourth Industrial Revolution and Beyond 2021, pp. 215-227. Springer, Singapore, 2022.

- MS Islam, MM Islam, **S Ahmed**, MS Rahman, K Kumar, and MS Kaiser. "IoET-SG: Integrating internet of energy things with smart grid." In Sustainable Developments by Artificial Intelligence and Machine Learning for Renewable Energies, pp. 49-61. Elsevier, 2022.

- **S Ahmed**, M Hossain, MS Kaiser, MBT Noor, M Mahmud, and C Chakraborty. "Artificial intelligence and machine learning for ensuring security in smart cities." In Data-driven mining, learning and analytics for secured smart cities, pp. 23-47. Springer, Cham, 2021.

- P Chakraborty, **S Ahmed**, MA Yousuf, A Azad, SA Alyami, and MA Moni. "A human-robot interaction system calculating visual focus of human's attention level." IEEE Access 9: 93409-93421, 2021

- **S Ahmed**, M Hossain, and MBT Noor. "Convid-net: an enhanced convolutional neural network framework for covid-19 detection from x-ray images." In Proceedings of international conference on trends in computational and cognitive engineering, pp. 671-681. Springer, Singapore, 2021.

- **S Ahmed,** M Nahiduzzaman, T Islam, FH Bappy, and K Hasan. "Towards a Fault-tolerant and Storage Efficient Cloud: Balancing Between Redundancy and Deduplication." IEEE International Conference on Communication (ICC), 2023. (Under Review)

- **S Ahmed,** M Hossain, SB Nur, and MS Kaiser. "A Multimodal Autism Spectrum Disorder (ASD) Dataset." Data in Brief, Elsevier. (Under Review)

- S Shafiq, **S Ahmed**, MS Kaiser, M Mahmud, MS Hossain, and K Andersson "Comprehensive Analysis of Nature-Inspired Algorithms for Parkinson's Disease Diagnosis." IEEE Access. (Accepted)

- A Luna, **S Ahmed**, N Nosheen, MA Yousuf, and MA Moni. "MRI Classification and Segmentation for Brain Tumor Using Convolutional Neural Network and U-Net." Computers in Biology and Medicine- Elsevier (Under Review)

- **S Ahmed**, N Jahan, MBT Noor, and MA Yousuf. "Bangla Handwritten Character Recognition using Deep Convolutional Neural Network for multi-label image annotation." Pattern Recognition and Image Analysis, Springer (Under Review)

REFERENCE

DR. M. SHAMIM KAISER

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