

# S A B B I R A H M E D



## RESEARCH INTEREST

Machine Learning, Computer vision,  
Algorithms Optimization, Neural  
Network, 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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🐙 [github.com/10-o1](https://github.com/10-o1)

🎨 [behance.net/sabbirsas](https://www.behance.net/sabbirsas)

📄 [researchgate.net/profile/Sabbir-Ahmed-62](https://www.researchgate.net/profile/Sabbir-Ahmed-62)

🌐 Website : <https://10-o1.github.io/sabbir/>



## SKILLS

### COMPETITIVE PROGRAMMING

### PROBLEM SOLVING

### TENSORFLOW & TORCH

### ROBOTICS (RASPBERRY PI)

### IOT & MICROCONTROLLER

### GRAPHICS DESIGN & UI/UX

### WEB DEVELOPMENT

### IMAGE PROCESSING

### SOLIDITY



## EXPERIENCE

KING ABDULAZIZ  
UNIVERSITY,JEDDAH,  
SAUDI ARABIA

2022 - PRESENT

DIVERSASIA

2021 - PRESENT

INSTITUTE OF INFORMATION  
TECHNOLOGY,  
JAHNAGIRNAGAR  
UNIVERSITY

2019 - 2022

CP COMMUNITY, IIT, JU

2019 - 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.

### 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).

### TEACHING ASSISTANT

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

### 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** (IEEEExtreme 14.0 - 2020, Jahangirnagar University, Bangladesh), Team- JuPsychosocial

**2nd Runners Up** (IEEEExtreme 13.0 - 2019, Jahangirnagar University, Bangladesh), Team-CGPAisProbabilistics

**-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

ONLINE  
PROGRAMMING  
CONTESTS

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, Heart-bleed, 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. "[IoT-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 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, 2022.
- **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)
- A Luna, **S Ahmed**, N Nosheen, MA Yousuf, and MA Moni. "[Robust Clinical Applicable CNN and U-Net based Algorithm for MRI Classification and Segmentation for Brain Tumor](#)." Expert Systems with Applications- Elsevier (Under Review)
- **S Ahmed**, MBT Noor, N Jahan, and MA Yousuf. "[Bangla Handwritten Character Recognition using Deep Convolutional Neural Network for multi-label image annotation](#)." Knowledge Based System, Elsevier (Under Review)



## REFERENCE

### DR. M. SHAMIM KAISER

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