

# **AREA OF INTEREST**

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



**B.SC. IN INFORMATION TECHNOLOGY** Institute of Information Technology, Jahangirnagar University

2017-2022

**CGPA 3.63** 



# CONTACT

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## **SKILLS**

**COMPETITIVE PROGRAMMING** 

**PROBLEM SOLVING** 

**MACHINE LEARNING & AI** 

**ROBOTICS** 

**IOT & MICROCONTROLLER** 

**GRAPHICS DESIGN & UI/UX** 

**WEB DEVELOPMENT** 

**IMAGE PROCESSING** 

**BLOCKCHAIN & SECURITY** 



## COMPETITIVE PROGRAMMING 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

- 706th Codeforces Round #601 (Div. 2) - 940h Codeforces Round #662 (Div. 2)
- 186th Codechef February Cook-Off 2019 Division 2

SOLVED MORE THAN **600 PROGRAMMING** PROBLEMS IN VARIOUS **ONLINE JUDGES** 

Codeforces - 450 problems (handle: 10\_01) Codechef - 20 problems (handle: s\_s)

UVa Online Judge - 60 problem (handle: @\_@, sabbir\_iit)

AtCoder - 35 problems (handle: O\_O1) LightOJ - 50 problems (handle: sas114507)

ONLINE CONTEST RATING

Codeforces Rating - 1618 (max) Codechef Rating - 1720 (max)

Also participated in more than 100 online contests



### **EXPERINCE**

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 Al (Artificial Intelligence).

Institute of Information Technology, Jahangirnagar University

2019 - PRESENT

**TEACHING ASSISTANT** 

Assess more than 200 students of 3 batches. Taken Electronics & Electrical Circuit, electronic devices and circuit & Digital Logic Design Courses with labworks

CP Community, IIT, JU

2019 - PRESENT

TRAINER

I train juniors, coordinate weekly contests and arrange problem solving classe



# **EXTRACURRICULAR ACTIVITIES**

IEEE Student Branch, Jahangirnagar University

2021 - PRESENT **CHAIRPERSON** 2019 - 2021

VICE-CHAIR 2018 - 2019 JOINT SECRETARY

TCCF 2020 Conference **TECHNICAL LEAD** 



TCCE 2020 CONFERENCE

**SPRINGER** 

CONVID-NET: AN ENHANCED CONVOLUTIONAL NEURAL NETWORK FRAMEWORK FOR **COVID-19 DETECTION FROM X-RAY IMAGES** 

DEC 17, 2020

This article aims to demonstrate a modified deep convolutional neural network (CNN) framework namely Convid-Net based on a combination of residual network and parallel convolution (CONV) to detect COVID-19 from chest X-ray images.

**IEEE ACCESS JOURNAL** 

JUN 20, 2021

A HUMAN-ROBOT INTERACTION SYSTEM CALCULATING VISUAL FOCUS OF HUMAN'S ATTENTION LEVEL

Using Custom maderaspberry pi Bot and introducing image segmentation and detection technique for facial features, eyeball movement and gaze estimation were measured. Then Artificial Neural Network (ANN) and Recurrent Neural Network-Long Short Term Memory (LSTM) based Deep learning (DL) architectures have been proposed.

**TEHI 2021 CONFERENCE SPRINGER** 

MAR 22, 2022

TOWARD MACHINE LEARNING-BASED PSYCHOLOGICAL ASSESSMENT OF AUTISM SPECTRUM DISORDERS IN SCHOOL AND COMMUNITY

This article proposed a questionnaire based on ASD symptoms found in previous studies with 82 questions. Following that, a dataset is created by conducting a survey using the questionnaire. Several machine learning models that can identify ASD and its types are also compared.

Several other publication as "Assessment of Water Quality in Smart CityEnvironment Leveraging ML-IoT" in IC4IR-2021, "Artificial Intelligence and Machine Learning for Ensuring Security in Smart Cities" in Springer and more.



# **PROJECT & COURSEWORK**

INTRUSION DETEC-TION 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. Four different architectures: SVM, RF, DT, LSTM were implemented and evaluated in the process of reaching the final architecture providing best performance

TRAFFIC SIGN REC-**OGNITION** 

A novel framework for object classification based on Deep

Convolutional Neural Networks. We evaluated the proposed method using publicly available traffic

sign benchmarks (GTRSB)

CP TRACKER: A COMPETITIVE PRO-**GRAMMER'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.

**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

**WATER QUALITY & CONSUMPTION** MONITORING DASH-**BOARD** 

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.

Worked on more than 100 projects on robotics and ML. Such as line follower, PID based obstacle avoider robot with gas sensing capablities, Weather monitoring system, Smart Agriculture & gardening using IoT, Health-care monitoring, Remote control Boat, Fingerprint based attendance system, Sun tracting Solar Panel, Advance driving assitance & more.

ML Projects Includes projects on Image recogntion & detection, Multi-Labeled Neural Networks, NLP, Video feature extraction and prediction, Nature inspired algorithms, ANFIS, GAN etc. Applications such as complete Bangla OCR, Hearth arrhythmia detection, emotion detection, Human gait, recognition, Facial Features detection & more.



### REFERENCE

#### DR. M. SHAMIM KAISER

Director, Professor, Institute of Information Technology, Jahangirnagar University Email: mskaiser@juniv.edu

#### DR. MOHAMMAD ABU YOUSUF

Professor.

Institute of Information Technology, Jahangirnagar University Email: yousuf@juniv..edu