Tusher Chandra Mondol

Address : Dhaka, Bangladesh
Phone No : (+880) 1745001539
Email : tusher.mondol2013@gmail.com
Linkedin : https://www.linkedin.com/in/tusher-mondol-2a6179153
Website : https://tusher002.github.io/

RESEARCH INTEREST

Artificial Intelligence, Machine Learning, and Data Science.

EDUCATION

Khulna University of Engineering & Technology — **Khulna, Bangladesh**
B.Sc in Computer Science and Engineering — *March,2015-March,2019*
CGPA: 3.25/4.00
CGPA of last 3 semesters: 3.54

KEY SKILLS

Programming Language	Python, C, C++
Web Based Language	HTML, CSS, PHP
DBMS	Oracle, MySQL
IDE	Anaconda, CodeBlocks
Software Packages	CISCO Packet Tracer
Operating System	Windows, Ubuntu

PUBLICATIONS

- **Tusher Chandra Mondol**, Hasib Iqbal, M M A Hashem.
  "Deep CNN-Based Ensemble CADx Model for Musculoskeletal Abnormality Detection from Radiographs" primarily accepted in 5th International Conference on Advances in Electrical Engineering (ICAEE 2019).

RESEARCH EXPERIENCE

"Deep CNN-Based Ensemble CADx Model for Musculoskeletal Abnormality Detection from Radiographs"

- The main goal of this research is to develop a computer-aided diagnosis (CADx) model that will help the doctors to identify musculoskeletal abnormalities through radiographs. Our proposed technique tested on a benchmark radiographic dataset named 'MURA'.
- This research finds out the various suitable benchmark architectures (VGG-19, ResNet, DenseNet) efficiency to detect musculoskeletal abnormalities in radiograph and leads to propose a hybrid supervised machine learning approach.
- This Hybrid approach generates 85.85% accuracy which is relatively better than other classifiers in terms of performance metrics.

"Non-Invasive Measurement of Blood Components Level from PPG Characteristics Features of Fingertip Video Using Deep Neural Networks"

- The main goal of this research is to propose a new non-invasive, and convenient method with the motive of measuring blood components level (Hemoglobin, Glucose, Hemoglobin--A1C, and Creatinine) using Photoplethysmogram (PPG) characteristics features which are extracted from fingertip videos.
- Genetic Algorithm (GA) was used to select best features and finally a Deep Neural Networks (DNNs) model was developed to measure blood components level.
- This approach estimates the accuracy of ±0.243 gm/dL (R = 0.940), ±0.237 mmol/L (R = 0.975), ±0.112 (%) (R = 0.949), and ±0.031 mg/dL (R = 0.939) respectively for Hemoglobin, Glucose,

Hemoglobin A1C, and Creatinine.

SELECTED ACADEMIC PROJECTS

Secured Automated Toll Collection System *Nov 2017-April 2018*

- It is a Raspberry Pi based system concerned with fully automated toll collection system using RFID tags with privacy preserving mutual authentication system.
- It has a websites that works as a bridge between authority and citizens.

Library Management System *April 2017 – October 2017*

- This websites helps to manage daily activities of a library.
- It helps to check available books, take books as loan, check fine, check abilities of a student to take loan, total amount of loans in a day.

Alumni Association Management System *Nov 2016 – April 2017*

- A web platform to manage alumni association of a university.
- It works as a bridge between authority and citizens.

AWARDS AND ACHIEVEMENTS

- Champion in University Day Project Showcasing, 2017, organized by KUET.
- Champion in Intra Department Idea Contest, 2017, organized by CSE association, KUET.
- 2nd in System Development Project, 2017, organized by Department CSE, KUET.
- 5th in Intra KUET Programming Contest, 2016, organized by Department CSE, KUET.
- Scholarship from Chevron International REACH Scholarship Program.
- Vocational Scholarship from Khulna University of Engineering and Technology (2015-2018).

ONLINE COURSES

- Machine Learning by Stanford University (Hosted by Coursera).

LEADERSHIP & VOLUNTARY ACTIVITIES

- Vice President, CSE association, KUET.
- Vice President, Special Group Interested in Programming Contest(SGIPC), KUET.
- General Secretary, Hardware Acceleration Club of KUET(HACK), KUET.
- General Secretary, Dream(blood donating organization), KUET.
- Chief Organizer, Youth Summit (2017,2018), KUET.
- Organizer, National High School Programming Contest, Khulna Zone (2015,2016,2017).

REFERENCES

- **Dr. M.M.A Hashem**
  Professor, Department of Computer Science and Engineering
  Khulna University of Engineering & Technology, Khulna-9203 , Bangladesh.
  mma.hashem@gmail.com, hashem@cse.kuet.ac.bd
  Cell:(+880) 1714003949

- **Dr. K.M Azharul Hasan**
  Professor, Department of Computer Science and Engineering
  Khulna University of Engineering & Technology, Khulna-9203 , Bangladesh.
  azhasan@gmail.com, az@cse.kuet.ac.bd
  Cell:(+880) 171408723