Md Toukir Ahmed

Personal Data

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Education

2021- Present Doctor of Philosophy (PhD)
Department of Agricultural and Biological Engineering,
University of Illinois Urbana-Champaign (UIUC),
Urbana-61801, United States
CGPA:4.00/4.00

2012- 2017 Bachelor of Science (B.Sc.) in Computer Science and Engineering
Department of Computer Science and Engineering (CSE),
Bangladesh University of Engineering and Technology (BUET),
Dhaka-1000, Bangladesh
CGPA:3.67/4.00

Professional Experience

- Working as a graduate research assistant at Department of Agricultural and Biological Engineering in **University of Illinois Urbana-Champaign (UIUC)** since August-21, 2021.
- Working as an Assistant Professor (on study leave) of Department of Computer Science and Engineering in **Pabna University of Science and Technology (PUST)** since August-3, 2020.
- Worked as a Lecturer of Department of Computer Science and Engineering in **Pabna University of Science and Technology (PUST)** from February-3, 2018 to August-2, 2020.
- Worked as Lecturer of Department of Computer Science and Engineering in **Bangabandhu Sheikh Mujibur Rahman Science and Technology University (BSMRSTU)**, Gopalganj from December-31, 2017 to January-31, 2018.
- Worked as a Lecturer of Department of Computer Science and Engineering in **Bangladesh University of Business and Technology (BUBT)** from February-5, 2017 to December-15, 2017.

Research Interests

Machine Learning, Artificial Intelligence, Computer Vision, Bioinformatics, Spectroscopy, Image Processing

Publication

Tarafder, Sumit, Md Toukir Ahmed, Sumaiya Iqbal, Md Tamjidul Hoque, and M. Sohel Rahman. **RBSURFpred: modeling protein accessible surface area in real and binary space using regularized and optimized regression.** Journal of theoretical biology 441 (2018): 44-57.**(ELSEVIER, Q1)** Article Link.

Kamruzzaman, Mohammed, Dipsikha Kalita, Md Toukir Ahmed, Gamal ElMasry, and Yoshio Makino. **"Effect of variable selection algorithms on model performance for predicting moisture content in biological materials using spectral data."** Analytica Chimica Acta (2021): 339390.**(ELSEVIER, Q1)** Article Link.

Undergraduate Thesis

I have completed my undergraduate research in Bioinformatics under Dr. M. Sohel Rahman, Professor, Dept of CSE, BUET. My research topic is **REGAd^{3}p$^+$: An Improved Predictor for Accessible Surface Area with Regression and Optimized by Metaheuristics**. In this work, we present REGAd^{3}p$^+$, an improved version of Regularized Exact Regression with Polynomial kernel of degree 3 (REGAd^{3}p) by introducing three new features. We further optimize the REGAd^{3}p model with different metaheuristic algorithms and compared the performance thereof in terms of MAE and PCC.

Courses Taken

- Basic CS Courses: Data Structures, Algorithms, Networking, Software Engineering, Database Design
- Data Analysis: Artificial Intelligence, Machine Learning, Introduction to Data Science, Computational Mathematics, Computational Bioengineering

Completed Projects

Hearts:	This is a typical card game where a person plays with 3 opponents (computer).The game is challenging as the opponents always try to win.It was designed in OpenGL (iGraphics) and written in C.
Mcq Server:	A Server-client socket programing based project with GUI using Java.
EShopper:	EShopper is a database driven website both in pc and android platform where shopping can be done on internet.It was developed in Python Django.
Appointment Scheduler:	A oracle based system designed in C# to schedule appointment of the client effectively and hierarchically.
Networking Project:	Improvement in End-to-End delay Computation Of AODV Protocol Using NS2
AI Projects:	Different Machine learning and Pattern Recognition based projects on Id3, KNN, Naive Bayes, ANN, Clustering were completed using java and python.
Graphics Project:	3D modeling, shading and reflections of objects were done in Graphics project.
Projects on ML and Deep Learning:	Certified on some online courses based on Machine Learning and Deep Learning. The projects and certification can be found in this github link.

Computer Skills

Language:	C, C++, C#, Python, Java, Assembly, R, MATLAB, PL/SQL
Analysis Tool and Library:	Weka, Pandas, Tensorflow, Numpy, Scikit learn, NLTK, ENVI
Database:	Oracle, MySQL
Operating System:	Windows, Linux, Mac
Scripting:	LaTeX, HTML, Shell Script(Linux)
Version Control:	GitHub, Box

Scholarships

- Dean's List Award for academic excellence in level-4 (GPA: 3.82, session:2014-15).
- National Education Board Scholarship (General Grade) in SSC.
- National Education Board Scholarship (General Grade) in Junior Scholarship Examination.

CO CURRICULAR ACTIVITIES

- Active member of Notre Dame Chess Club, Notre Dame Science Club, BUET Chess Club
- Champion in the annual chess competition of Notre Dame College (2010)
- Runner-up in CSE-Fest (2012) badminton tournament
- Runner-up in Intra-varsity badminton tournament