

FARIHA TABASSUM ISLAM

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EDUCATION

Bangladesh University of Engineering and Technology (BUET)

Master of Science, Computer Science and Engineering

Jun 2021

CGPA 3.92 out of 4.00

Thesis: A Privacy-enhanced Approach for Planning Safe Routes with Crowdsourced Data and Computation

Bangladesh University of Engineering and Technology (BUET)

Bachelor of Science, Computer Science and Engineering

Oct 2018

CGPA 3.89 out of 4.00

Thesis: An Efficient Approach for Real-Time Crowdsourced Package Delivery using Public Transport Networks

WORK EXPERIENCE

Lecturer

Feb 2019 - Present

Dept. of Computer Science & Engineering, United International University

Part-time Research Assistant

Jan 2022 - Jun 2022

Dept. of Computer Science & Engineering, Bangladesh University of Engineering & Technology

High Profile ICT Scholar Fellow

Jun 2019 - Jun 2020

ICT Division, Govt. of Bangladesh

PUBLICATION

A Privacy-Enhanced and Personalized Safe Route Planner with Crowdsourced Data and Computation

Fariha Tabassum Islam, Tanzima Hashem, Rifat Shahriyar

ICDE 2021 (CORE Rank A*), DOI 10.1109/ICDE51399.2021.00027

FELLOWSHIP

High Profile ICT Scholar Fellowship | BDT 2.4 Million

2019

ICT Division, Govt. of Bangladesh

RESEARCH EXPERIENCE

Safe route planner | *Master's thesis, published in ICDE2021, extension under revision*

Worked on designing the system architecture and two efficient algorithms for finding safe routes in privacy-preserving way, prepared data using Python (Pandas, OSM), simulated the full system and wrote *all* experiments using Java and developed Android prototype using XMPP server for data sharing.

Crowdsourced package delivery in public transport network | *Undergrad thesis*

Worked on designing efficient algorithms for finding package delivery routes in the public transport network that match commuters' pre-planned journey and other constraints, prepared data using PostgreSQL and Python from a very large dataset, and wrote *all* experiments using Java.

Mobile image analysis in healthcare | *A survey manuscript under preparation*

Collaborated in writing a grant proposal and a survey paper.

Dissimilar route finding | *Manuscript under revision*

Implemented parts of experiment codes in C++ and Python and worked on the revision phase.

Trajectory user linking | *Master's course project, manuscript under review*

Worked on problem formulation and prepared data using Python.

SKILLS

Java, Python (Scikit-learn, NumPy, SciPy, PyTorch basics), C++, SQL, Android app development — used for research experiments, data analysis, course projects during Bachelor's and Master's, and teaching.

AWARDS & SERVICES

- First runner-up group | Hackathon for Women 2017 (36 hours) by ICT Division, Govt. of Bangladesh
- First runner-up group | Women's Day Innovation Challenge 2017, Facebook Developer Circle, Dhaka
- University Merit | BUET - 2015, 2017
- Dean's Honor List | BUET - 2015-18

Reviewer. WISE (2021, 2022), NSysS (2020, 2021), APWeb-WAIM (2019)

NOTABLE TEACHING EXPERIENCES

Undergraduate Courses: *Theory.* Object Oriented Programming, Data Structure and Algorithms I & II, Artificial Intelligence, Compiler. *Lab.:* Introduction to Computer Systems, Structured Programming Language Lab, Data Structure and Algorithms II Lab, Artificial Intelligence Lab, Pattern Recognition Lab, System Analysis and Design Lab, Software Engineering Lab, Compiler Lab