

# FARIHA TABASSUM ISLAM

✉ fariha.t13@gmail.com | 🌐 fariha.xyz | 📧 farihat13

## 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

### MTUL: A Novel Approach for Multi-Trajectory User Linking

*Fariha Tabassum Islam, Md. Tareq Mahmood, Mahmuda Naznin*

NSysS 2022, Acceptance Rate 27%

## 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, accepted in NSysS 2022*

Worked on problem formulation, data preparation using Python and writing.

## 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, Data Structure and Algorithms II, Artificial Intelligence, Pattern Recognition, System Analysis and Design, Software Engineering, Compiler