

# ZANNATUL FERDOUSEE

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## FIELDS OF INTEREST

Machine Learning, Deep Learning, Computer Vision, Bioinformatics, Digital Signal Processing

## ACADEMIC CREDENTIALS

**Master's in Computer Science**  
University of Minnesota Duluth

**2025- present**  
Minnesota, USA

**Bachelor of Science in Computer Science and Engineering**  
Rajshahi University of Engineering and Technology (RUET)

**2017–2022**  
Rajshahi, Bangladesh

## RESEARCH EXPERIENCE

### Undergraduate Thesis:

Focused on breast cancer detection using VGG-19 and ResNet-50 models, achieving over 98% accuracy with mammographic images. This research involved image preprocessing, feature extraction, and performance evaluation using metrics such as accuracy, recall, and F1-score. The results were published at [ICCIT 2023].

## PUBLICATIONS

- **Zannatul Ferdousee\***, Md Rakibul Haque “Integrating Feature Selection and Extraction with Tuned Multilayer Perceptrons for Predicting Student Dropout Risk in Higher Education”. In 2024 2nd International Conference on Information and Communication Technology (ICICT 2024), DOI:10.1109/ICICT64387.2024.10839727
- **Zannatul Ferdousee\***, S M Shovan, MD Sharifujjaman “Propionylation characterization ensembling classifiers on varied features”. In 2023 26th International Conference on Computer and Information Technology (ICCIT 2023), DOI:10.1109/ICCIT60459.2023.10441189
- MD Sharifujjaman\*, **Zannatul Ferdousee**, Nahin UI Sadad, Boshir Ahmed “Transfer Learning Based Approaches for Breast Cancer Classification using Mammogram Images”. In 2023 26th International Conference on Computer and Information Technology (ICCIT 2023), DOI:10.1109/ICCIT60459.2023.10441637
- Morseda Siddiqua\*, **Zannatul Ferdousee** “Deep Transfer Learning Based Approaches for Classification of Chest CT Scans: Normal, COVID-19, and Pneumonia.” 6th International Conference on Electrical Engineering and Information & Communication Technology (ICEEICT), DOI:10.1109/ICEEICT62016.2024.10534572

## WORK EXPERIENCE

**Graduate Teaching Assistant**  
University of Minnesota Duluth

**Aug'2025- Present**

- I lead discussion classes and help students during lab sessions to better understand the material. I also grade assignments and exams.

### Research Assistant

Leaf Technologies  
Supervised by Krishna Ray, Chief Technology Officer

**Feb'2023 – Apr'2024**  
Dhaka, Bangladesh

- Worked on Computer Vision, Machine Learning models, and Digital Signal Processing tasks, primarily analyzing audio data.
- Utilized Python-based tools for signal processing and performed Fast Fourier Transform (FFT) analysis to extract key features from audio signals.

## PROJECTS

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- Created the RUET Alumni website using HTML and CSS.
- 4-bit mini ALU design on breadboard
- Developed "Hotels in Rajshahi," an app for listing hotels and booking based on availability.

## ACADEMIC ACHIEVEMENTS

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- **Technical Scholarship** (2017–2022)  
Awarded for academic excellence in the Entrance Exam from the Faculty of CSE at RUET
- **Secondary School Certificate Scholarship** (2014–2017)  
Awarded for outstanding performance in the SSC examination. Dhaka Education Board
- **Primary School Scholarship** (2009–2013)  
Awarded for outstanding academic performance in primary education. Dhaka Education Board

## MAJOR COURSES

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Database Systems	Data Structure
Computer Architecture and Design	Data Mining
Artificial Intelligence	Neural Networks and Fuzzy Systems
Digital Image Processing	Computer Graphics and Animations
Parallel & Distributed Processing	Digital Signal Processing

## TECHNICAL SKILLS

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<b>Languages</b>	C, C++, Python,
<b>ML Frameworks</b>	PyTorch, TensorFlow, Keras, Scikit-learn
<b>ML Tools</b>	OpenCV, NumPy, Pandas, Matplotlib
<b>Databases</b>	MySQL
<b>Software &amp; Tools</b>	LaTeX, MS Office

## EXTRA-CURRICULAR ACTIVITIES

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- **Leadership:** Class Representative, Dept of CSE, RUET 2017-2020  
Acted as a liaison between students and faculty, facilitating communication, coordinating exam schedules, and representing the CSE department at official events and meetings.
- Executive Member, RUET Career Forum (RCF) 2018-2021
- Science Fair and English Language Club, VNSC 2012-2014
- Science Fair, RUMC 2014-2016

## REFERENCES

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**Dr. Md. Shahid Uz Zaman**  
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Department of Computer Science and Engineering,  
Rajshahi University of Engineering and Technology  
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**Prof. Dr. Md. Al Mamun**  
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