

# Homaira Huda Shomee

PhD Researcher

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## Education

Aug 2023 - Ongoing	<b>University of Illinois Chicago</b> <i>PhD in Computer Science</i>	Chicago, IL
Jan 2017 - Jan 2020	<b>Brac University</b> <i>B.Sc in Computer Science and Engineering</i> <b>CGPA: 3.93/4.00</b> <i>Thesis: Alzheimer's Disease Detection and Classification using Transfer Learning Technique and Ensemble on Convolutional Neural Networks</i>	Dhaka, Bangladesh

## Research Interest

Data Science | Multimodal Learning | Deep Learning | Graph Neural Networks

## Research Experience

- Conducting research on Patent generation using Large Language Model.
- Conducted research on generative adversarial networks (GANs) for high-quality synthetic fingerprint generation and realistic gastrointestinal polyp image synthesis using deep learning techniques.
- Designed and developed deep learning models and transfer learning technique for license plate detection and recognition in a multi-step process for Bangladeshi vehicles and to detect Alzheimer's Disease.

## Publications

Journal	[J1] A. Sams, <b>H. H. Shomee</b> , and S. M. Rahman, "HQ-finGAN: High-quality synthetic fingerprint generation using GANs," <i>Circuits, Systems, and Signal Processing</i> , vol. 41, no. 11, pp. 6354–6369, 2022.
Conference	[C3] A. Sams and <b>H. H. Shomee</b> , "GAN-based realistic gastrointestinal polyp image synthesis," 2022 IEEE 19th International Symposium on Biomedical Imaging (ISBI), 2022. [C2] <b>H. H. Shomee</b> and A. Sams, "License plate detection and recognition system for all types of Bangladeshi vehicles using multi-step deep learning model," 2021 Digital Image Computing: Techniques and Applications (DICTA), 2021. [C1] S. U. Sadat, <b>H. H. Shomee</b> , A. Awwal, S. N. Amin, M. T. Reza and M. Z. Parvez, "Alzheimer's Disease Detection and Classification using Transfer Learning Technique and Ensemble on Convolutional Neural Networks," 2021 IEEE International Conference on Systems, Man, and Cybernetics (SMC), 2021, pp. 1478-1481

## Work Experience

Jan 2024 - Ongoing	<b>University of Illinois at Chicago</b> <i>Research Assistant</i> <ul style="list-style-type: none"><li>• Conducting research on Patent text generation using Large Language Model</li></ul>	Chicago, IL
Aug 2023 - Dec 2023	<b>University of Illinois at Chicago</b> <i>Teaching Assistant</i> <ul style="list-style-type: none"><li>• Supervised senior undergraduate students with course works and projects for "Computer Design" course.</li></ul>	Chicago, IL
May 2021 - May 2023	<b>Brac University, Bangladesh</b> <i>Lecturer</i> <ul style="list-style-type: none"><li>• Instructed Theory Courses: Programming Language I   Discrete Mathematics Instructed Laboratory Courses: Introduction to Computer Science   Programming Language I   Programming Language II   Operating Systems   Database Systems   Computer Graphics</li></ul>	Dhaka, Bangladesh