Ananta Raha

M.Sc. (Eng.) Student, Department of Computer Science and Engineering (CSE)
Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh

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Research Interests

Computer Vision • Deep Learning • Medical Imaging • Multimodal Learning • Explainable AI

Education

2024–Present **M.Sc. in Computer Science and Engineering**
Bangladesh University of Engineering and Technology
Current CGPA **3.83** (Out of 4.00)

2018–2023 **B.Sc. in Computer Science & Engineering**
Rajshahi University of Engineering & Technology, Rajshahi
CGPA **3.54** (Out of 4.00)
Thesis title: "*Automated Detection and Segmentation of Brain Tumor Using Low-Complex RCNN and Modified U-Net*"

Publications

- **Raha, A., Parvin, F., Jannat, T.** (2024). *Brain Tumor Segmentation with Efficient and Low-Complex Architecture Using RCNN and Modified U-Net*. In Lecture Notes in Networks and Systems, vol 867. Springer, Singapore. https://doi.org/10.1007/978-981-99-8937-9_22

- **Raha, A., & Tasnim, Q. S.** (2025). *Efficient mulberry leaf disease detection in Bangladesh: A lightweight approach for real-time applications*. In 2025 Int. Conf. on Electrical, Computer and Communication Engineering (ECCE), Chittagong, Bangladesh, pp. 1–6. IEEE. https://doi.org/10.1109/ECCE64574.2025.11013948

- **Raha, A.** *Lightweight COVID-19 Detection from Chest CT-Scans Using Attention-Based CNN*. SN Computer Science. (Accepted, in press)

- **Raha, A., Ahmed, J., Hossain, M.S., Narman, H.S.** *Defending Model Inversion Attack Using an Improved Filter-Based Approach*. Manuscript submitted (Under review).

Research Projects

2025 Resolving Ambiguity in Multi-Mapping Reads Using Deep Neural Networks
Academic project; Gene Expression, RNASeq, Ambiguous Reads, Pair-Ended Reads, Illumina

2025 Gamification in E-Learning: An HCI-Focused Study on Bangladeshi University Students
Academic project; Human-Computer Interaction, Survey, Online Learning

2025 Defending Model Inversion Attack from A Network Perspective
Academic project; Neural Network Security, Defense, Gradient Inversion, Adversarial Attack

2024 Deep Learning Based Fully Automated Malaria Diagnosis from Full-Slide Blood Smears
Academic project–source; Medical Imaging, Deep Learning, Classification

2024 Ultra-lightweight Approach for Efficient Mulberry Leaf Disease Detection in Bangladesh
Academic project–source; Deep Learning, Data Mining, Classification

2023 Lightweight COVID-19 Detection from Chest CT-Scans Using Attention-Based CNN
Personal project–source; Medical Imaging, Computer Vision, Deep Learning, Classification

2022 Efficient Sericulture Using IoT and Machine Learning
Academic project–source; Data Preprocessing, IoT, Machine Learning, Embedded Systems

Technical Skills

- Proficient with **LaTeX**, Microsoft Word, Excel, PowerPoint, and related software

- Mobile Application Development: ***Over 6 years*** *of experience, using Java and Android Studio*

- Research Experience in Machine Learning & Computer Vision (*OpenCV, TensorFlow, etc.*)

- Practical Experience in Robotics and IoT (Internet of Things); *programming Arduino, ESP32, etc.*

- Programming Languages: C/C++, *Java, Python, JavaScript, Assembly*

- Web Development & Scraping with BeautifulSoup4, *Django, React.js, TailwindCSS, Bootstrap, jQuery*

- Fast touch typing with 90 words per minute

Other Projects

2019–Present	MyMoney–Personal Finance Management *Android app*; **Live on [Google Play Store](#), 1M+ installs**
2022	MorseBuddy–Decode Morse Code from Blinking Light Signals *Android app–[source](#)*
2021	Shopkeeper–Grocery Shop Management *project–[GitHub](#)*

Awards

- Fellowship–BUET MSc Program (April, 2024) in recognition of academic excellence.

- National Merit Scholarship–Government of Bangladesh (2017, 2015, 2012) *for excellence in the HSC, SSC and JSC Examinations, respectively*

- Participant at National Science Olympiad, Dhaka (2014)–*Secured 34th position nation-wide*

Certifications & Conferences

2025	2025 International Conference on Electrical, Computer and Communication Engineering February 13-15, CUET, Bangladesh; *Presented research work "Efficient Mulberry Leaf Disease Detection in Bangladesh: A Lightweight Approach for Real-Time Applications."*
2023	2nd International Conference on Big Data, IoT and Machine Learning September 6-8, Dhaka, Bangladesh; *Presented research work "Brain Tumor Segmentation with Efficient and Low-Complex Architecture Using RCNN and Modified U-Net."*
2022	Regular Expressions in Python–Coursera; *Certificate: [link](#)*
2020	Specialization: Python for Everybody–University of Michigan; *Certificate: [link](#)*

Language Proficiency

- Native: Bengali

- Proficient in English, **IELTS Score: 7.0** (L: 7, R: 7, W: 6.5, S: 6.5)

References

- Dr. Md. Shohrab Hossain
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  Email: mshohrabhossain@cse.buet.ac.bd

- Farjana Parvin
  Assistant Professor, Dept. of CSE, RUET
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