Ananta Raha

M.Sc. (Eng.) Student, Department of Computer Science and Engineering (CSE)
Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
+880 1959-400541 | anantaraha2@gmail.com | anantaraha.com | anantaraha | anantaraha | R[G] Ananta-Raha

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.** *Lightweight COVID-19 Detection from Chest CT-Scans Using Attention-Based CNN*. SN Computer Science, Vol. 6, 853 (2025). https://doi.org/10.1007/s42979-025-04403-5
- **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., 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., Ahmed, J., Hossain, M.S., Majumdar, 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 Context-Aware Deep Neural Networks
Academic project–source *Gene Expression, Ambiguous Reads, MLP, 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; *Medical Imaging, Computer Vision, Deep Learning, Classification*

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

Technical Skills

- Proficient with **LaTeX**, Microsoft Word, Excel, PowerPoint, and related software
- Mobile Application Development: ***Over 7 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
  Professor, Dept. of CSE, BUET
  Contact: +880-2-55167100
  Email: mshohrabhossain@cse.buet.ac.bd
- Farjana Parvin
  Assistant Professor, Dept. of CSE, RUET
  Contact: +880 1739 497360
  Email: farjana@cse.ruet.ac.bd