

Sajib Acharjee Dip

Undergraduate Researcher | Machine learning enthusiastic | Software Developer

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Education

BSc in Computer Science and Engineering
Bangladesh University of Engineering and Technology
Feb 2017 - Present
CGPA: 3.82/4.00(till now)

Work experience

Research Experience
Undergraduate Thesis, CSE, BUET
April 2021 - Present

- Predicting epigenetic modifications using deep learning approach under Supervision of Dr. M. Sohel Rahman, Professor, CSE, BUET and Md. Abul Hassan Samee, PhD, Assistant Professor, Dept of Molecular Physiology and Biophysics, Baylor College of Medicine. The work is still in progress.

Research Intern
Xu lab, Carnegie Mellon University
April 2021 - Present

- Analysis of Cryo-Electron tomogram data of SARs-Cov2 and influenza viruses
- Performed segmentation and saliency detection of tomogram using PUB-SalNet and feature decomposition.

Software Development Intern
ESRD-Lab BUET
Feb 2021 - Mar 2021

- Developed a real-life e-health prescription generation and hospital management platform.
- Developed backend using Spring boot and used MongoDB for database
- Developed front-end using react, bootstrap, css to consume RESTful API

Projects

- Shikhan (A mobile app developed using React native and Node js)

Developed an e-learning platform where students can prepare themselves for undergrad admission test in Bangladesh. [\[View here\]](#)

- Image Segmentation on 3D brain MRI images to segment Brain tumor

Pre-processed MRI data, implemented loss function for image segmentation and applied a pre-trained U-net model to segment tumor regions on the 3D MRI images.

- Classification of diseases on Chest x-ray data with computer vision

Classified different diseases on Chest X-ray data using neural network model.

- Classification of text messages using NLP

Classified text messages as spam or ham using NLTK and scikit learn. [\[View here\]](#)

- Ghost Buster using Hidden Markov Model

A ghost catching game in a grid from some previous observations and continuous probability updation of the moving ghost developed using Java. [\[View here\]](#)

- Protirodh(A MERN-stack project)

A platform to stop harassment and bullying and providing proper personal assistance and mental help to the victims by experts. [\[View here\]](#)

- Generating realistic image using open-GL and Ray tracing

Generated realistic images of different shapes with reflection and refraction using ray-tracing and OpenGL. [\[View here\]](#)

- Multiplayer Online Shooting Game

A shooting game can be played from two PC developed using Java. [\[View here\]](#)

- C++ Compiler

Developed a compiler for c++ code using flex and bison. [\[View here\]](#)

Professional Development

- Deep Learning Specialization by Coursera**
Completed this 5-courses series on Deep Neural Networks, Computer Vision & RNNs of Coursera Instructed by Professor Andrew NG, Stanford University. [\[Code\]](#) [\[Certificate\]](#)
- AI for Medical Diagnosis by Coursera**
Had some handful experience of working with medical data instructed by Dr. Pranav Rajpurkar, Stanford University. [\[Code\]](#) [\[Certificate\]](#)
- Machine Learning and Data Science Bootcamp By Meridian International Group**
Learnt different machine learning model and had some practical works on that.

Skills

A quick learner. Likes to work with new technologies.

Have experience of deep learning models and worked on medical imaging projects

Have a good understanding of Object Oriented Programming and Design patterns.

Have a good understanding in Data structures, Algorithms and problem solving

Have experience in using git , shell script and linux operating system and have a good verbal and written communication skill in English

Languages

C, C++, Java, Python, JavaScript, PHP, LaTeX, MATLAB

Frameworks

Node js, Express js, Spring Boot, React js, React native, Flutter,

Database

NoSQL, PostgreSQL, MySQL

Awards

- Secured 2nd position in Inter-University Cyber drill 2021 organized by Bangladesh e-GOV CIRT.
- Got in Top 10 position in BUET Engineering Olympiad.
- Got Dean's List Award in each semesters till now.
- Got University Merit Award in 2nd year.
- Secured 3rd position in BRACU Hackathon building an app to reduce social network harassment and bullying.
- Was in top 7 in CTF competition 2021 arranged by IEEE BUET.

Activities

- Active Member of BUET Career Club and BUET Meditation Club.
- Actively participated in CSE Fest 2019 and was a member of organizing team of Hackathon and Game Fest arranged by BUET .
- Actively participated in CSE Fest 2018 and volunteered some programs
- Participated different programming contests and hackathons.