GOURAB ROY

Sylhet Engineering College,
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ABOUT ME

I'm a Machine Learning Researcher and Adjunct Lecturer with a focus on machine learning, deep learning, and computer vision. I've earned gold badges in problem-solving with C++ and Python on HackerRank. I've also published a research paper in biomedical imaging, showing my dedication to making a real impact in my field. As an Adjunct Lecturer, I'm passionate about creating an engaging learning environment by combining my research insights with effective teaching methods. I'm on the lookout for a M.Sc. or PhD position in a challenging academic environment where I can work on solving problems that have a global impact.

RESEARCH AREA

Artificial Intelligence, Machine Learning, Deep Learning, Medical Image Analysis, NLP, Computer Vision

EDUCATION

- **Sylhet Engineering College, Sylhet, Bangladesh**　　*February, 2018 - January, 2023*
  B.Sc.(Engg.) in Computer Science and Engineering　　CGPA: **3.56**/4.00
- **Khulna Public College, Khulna, Bangladesh**　　*GPA: 4.67/5.00*
  Higher Secondary Certificate　　2016 - 2017
- **St. Paul's High School, Mongla, Bagerhat**　　*GPA: 5.00/5.00*
  Secondary School Certificate　　2014 - 2015

PUBLICATIONS

- **Live**

  - Ornob, T.R., **Roy, G.** & Hassan, E. (2022). **"CovidExpert: A Triplet Siamese Neural Network framework for the detection of COVID-19".** Informatics in Medicine Unlocked, 101156, (Jan 13, 2023). DOI: 10.1016/j.imu.2022.101156 (Link)

- **Undergrad Thesis**

  - CerebralNet: A deep learning model to detect major abnormalities from brain CT and MRI scan via segmentation and classification techniques.

- **Working on & Under Review**

  - CrackClassification4: Classifying Four Types of Cracks in Structural Surfaces Using CNNs *(Under Review)*
  - Enhancing Concrete Performance: Machine Learning Models for Predicting and Classifying Mechanical Properties *(Under Review)*
  - Optical character recognition for ancient scripts: A case study on Syloti Nagri using deep learning models" *(Under Review)*
  - Optimizing Multilingual Summarization: Advanced Corpus Creation and Filtering Approach *(Under Review)*
  - BanglaFont45: A Benchmark Dataset for Transfer Learning in Bangla Font Classification. *(Ongoing)*

EXPERIENCE

- **Adjunct Lecturer**　　*January 2024 – Present*
  Sylhet Engineering College　　Sylhet, Bangladesh
  - Responsible for taking undergraduate classes, marking assessments, consulting students, conducting research, and supervising final year thesis students.
  - Courses instructed:
    * **CSE 817:** Introduction to Distributed Computing
    * **CSE 818:** Introduction to Distributed Computing (Sessional)
    * **CSE 509:** Computer Architecture

* **CSE 603:** Introduction to Data Science
* **CSE 604:** Introduction to Data Science (Sessional)
* **CSE 705:** Peripheral and Interfacing
* **CSE 505:** Microprocessor & MicroController
* **CSE 506:** Microprocessor & MicroController (Sessional)

PROJECTS

•**Data Analysis Projects**   *Source Code*

Python, Numpy, Matplotlib, Pandas, Jupyter Notebook

- Developed expertise in exploratory data analysis and visualization by completing diverse projects, including analysis of **Boston housing data, Covid-19 global health outcomes, and Google Play app ratings data**.
- Created a Git repository featuring **8 exploratory data analysis projects**, demonstrating skills in data visualization and analysis.

•**Python Projects**   *Source Code*

Python, PyCharm, Jupyter Notebook

- Developed multiple Python projects, including **Calculator, Dice rolling simulator, Tic Tac Toe game, Caterpillar game, Egg Catcher game, and Hangman game**.

•**Java Application**   *University Project*
                                                                                                              Source Code

Java, NetBeans IDE, MySQL, JFrame

- Designed and developed a **Billing System application** using **Java and MySQL** for university coursework, showcasing skills in programming, database design, and software development.

•**Web-Based Project**   *Source Code*

HTML, CSS, JavaScript

- Designed and developed a simple website called **Pioneer Bank** using HTML, CSS, and JavaScript.
- Published the project on **GitHub** for public access.

TECHNICAL SKILLS

Languages: C, C++, Python, Java, JavaScript
Machine Learning Libraries: PyTorch, TensorFlow, Scikit-learn
Databases: MySQL, SQLite
Developer Tools: Visual Studio Code, PyCharm, NetBeans IDE
Other Skills: Git, Windows, Linux, LaTeX

IELTS SCORE

Overall Band: 6.5, Listening: 7, Reading: 6.5, Writing: 6, Speaking: 6.0

CERTIFICATIONS & ACHIEVEMENTS

Problem Solving: Solved 350+ problems on platforms such as HackerRank, Codeforces, UVA
Achievements: Earned Gold Badges in C++ and Python problem solving on HackerRank
Machine Learning Specialization: Completed Machine Learning Specialization course on Coursera (Link)
Data Structures Course: Completed Data Structures course on Coursera (Link)
Data Visualization Masterclass: Completed Data Visualization in Python Masterclass on Udemy (Link)
Review Contribution: Contributed as a reviewer for Informatics in Medicine Unlocked (Link)

REFERENCES

Enamul Hassan
Designation: Assistant Professor, Department of Computer Science & Engineering, Shahjalal University of Science and Technology.
Teaching Assistant: Stony Brook University, Stony Brook, New York, US.
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