

ASHRAFUL KABIR

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SUMMARY

Computer Science graduate specializing in data structures, algorithms, and machine learning. Experienced in teaching foundational topics in programming and problem-solving. Passionate about leveraging computational techniques to solve real-world problems, particularly in machine learning, computer vision, and web development. Seeking to contribute technical expertise in a dynamic and challenging work environment, including remote roles.

EDUCATION

BRAC University

Bachelor of Engineering

Major in Computer Science and Engineering

Cumulative GPA: 3.92/4.0;

VC's List: Spring 2021, Fall 2021, Fall 2022, Spring 2023

Dean's List: Summer 2021, Summer 2023

BAF Shaheen School and College

Higher Secondary Certificate (HSC) in Science

BAF Shaheen School and College

Secondary School Certificate (SSC) in Science

Merul Badda, Dhaka-1212

November 2024 [Summer 2024]

Chattogram, Bangladesh

Jan 2019

Chattogram, Bangladesh

Jan 2017

RESEARCH WORK

Undergraduate Thesis

Synergistic Application of Advanced Machine Learning and Computer Vision Techniques for the Detection of Exoplanet and Star: Leveraging Contrastive Learning in Astronomical Imagery

October 2023 – October 2024

- Conducting research on exoplanet detection using contrastive learning and few-shot learning techniques, with a focus on high-resolution images from the James Webb Space Telescope (JWST).
- Applying self-supervised learning and deep learning approaches to improve the accuracy and efficiency of the detection system in astronomical imagery.
- Overcoming challenges in space image processing, including noise reduction and feature extraction from complex datasets.

Others paper

1. Using Natural Language Processing to Analyze Disaster Tweets with BERT and Transformer

Applied BERT and Transformer models to perform sentiment analysis and crisis detection on disaster-related tweets, contributing to social media analytics for crisis management.

2. Image Generation with DCGAN: A Deep Convolutional Generative Adversarial Network

Explored the capabilities of Deep Convolutional Generative Adversarial Networks (DCGANs) in generating high-quality synthetic images, analyzing the model's architecture and performance.

3. Implementing a Vanilla RNN and Analyzing its Limitations

Investigated the architecture and limitations of Vanilla Recurrent Neural Networks (RNNs) in sequential data processing, examining their strengths and weaknesses in handling long-range dependencies.

PROJECTS

Skincare AI collaborated with brainstation23 (Django, Machine Learning)

- Developed a web application using Django to analyze skin conditions and recommend personalized skincare products.
- Implemented machine learning algorithms to process user-uploaded images and identify skin types or issues with 90% accuracy.
- Designed a user-friendly interface with secure data handling for user inputs and product suggestions.

Comic Book Website (Django, SQLite)

- Built a full-stack web application using Django and SQLite to manage comic book collections.
- Implemented machine learning algorithms to process user-uploaded images and identify skin types or issues with 85% accuracy.

E-commerce Platform (PHP, MySQL)

- Created an e-commerce website using PHP and MySQL, featuring product listings, shopping cart, and order processing.
- Ensured efficient database management for seamless user transactions and inventory tracking.

Library Management System (PHP, MySQL)

- Designed a library management system to automate book borrowing, returns, and database operations.
- Utilized PHP and MySQL to develop a scalable solution for library administration.

Railway Management System (Arduino)

- Engineered an Arduino-based system to automate train station operations, including scheduling and resource management.
- Integrated hardware and software to ensure real-time functionality and operational efficiency.

WORK EXPERIENCE

Student Tutor

BRAC University – Introduction to Python, Object-Oriented Programming, Data Structures
Dhaka, Bangladesh | January 2023 – October 2024

- Assisted over 100 students per semester in mastering Python programming, object-oriented programming (OOP), and data structures through lab sessions and one-on-one support.
- Designed coding exercises and graded assignments/quizzes, ensuring alignment with course objectives.
- Enhanced student comprehension by providing clear explanations and practical examples.

Python Tutor

Code Mentor
Dhaka, Bangladesh | June 2023 – September 2023

- Taught Python programming to 40+ students, covering basic syntax, advanced concepts, debugging, and real-world applications.
- Delivered personalized guidance, improving students' coding skills and confidence.

Data Entry Specialist

Essential Health Care, Remote, USA | June 2023 – October 2024

- Managed health-related data entry tasks with a focus on accuracy and completeness, supporting company record-keeping.
- Utilized data entry software and databases to input and manage sensitive health information.

Assistant Manager – IT and Operations (SEZL)

Dhaka, Bangladesh | Jan 2025 – July 2025

- Managed the company's website, ensuring its functionality and updating content as needed.
- Supervised and maintained the central storage hub, ensuring data integrity and security.
- Led client meetings to understand their needs and provided solutions accordingly.
- Promoted the company's activities and updates on LinkedIn and Facebook to enhance its online presence.

SKILLS

- **Programming Languages:** Python, Java, PHP, SQL
- **Web Development:** Django, PHP, HTML, CSS, JavaScript
- **Database Management:** MySQL, SQLite
- **Machine Learning/Deep Learning:** TensorFlow, PyTorch, Scikit-learn, Keras
- **Computer Vision:** OpenCV, Image Augmentation, Object Detection
- **Data Analysis:** NumPy, Pandas, Matplotlib, Seaborn
- **Software Tools:** Git, Jupyter Notebook, VSCode

REFERENCES

Dr. Md. Golam Rabiul Alam

Professor, CSE, Brac University.
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Rajesh saha

Staff Software Engineer
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