ALISTAIR BISWAS

+880 1742159001 | alistairb358@gmail.com | Alistair Biswas | Alistair Biswas

DIT Project, Merul Badda, Dhaka 1212, Bangladesh

Objective

As an aspiring Lecturer in Computer Science, I am driven by a passion for empowering students through a dynamic and interactive learning experience. With a robust foundation in software development, machine learning, data analysis, networking, and emerging technologies, I am eager to contribute to academic excellence and innovation. I am committed to creating a collaborative, engaging classroom environment where students can cultivate critical thinking, problem-solving abilities, and technical expertise. Alongside my dedication to student success, I am also deeply invested in advancing my own knowledge through continuous research and professional development, ensuring that I remain at the forefront of the rapidly evolving field of Computer Science.

Research Interests

Deep Learning, Machine Learning, Natural Language Processing, Algorithmic Trading, Computer Vision, Large Language Models, Image Processing.

Experience

- **Southeast University** *February 2025 - Present*
  Adjunct Lecturer Dhaka, Bangladesh
  - **Courses:** Algorithm, Programming Language I, Programming Language I Lab, Communication Lab

Education

- **Ahsanullah University of Science and Technology** *December 2020 - January 2025*
  BSc. in Computer Science and Engineering (CSE) Dhaka, Bangladesh
  - **CGPA:** 3.786/4.00 (Dean's List of Honor)
  - **Thesis:** Algorithmic Treding and Machine Learning for Profit Maximization: A Case Study on Dhaka Stock Exchange.
- **Government Science College** *July 2017 - April 2019*
  HSC (Science) Dhaka, Bangladesh
  - **GPA:** 5.00/5.00

Honors and Achievements

- **Dean's List of Honor** *January 2025*
  Ahsanullah University of Science and Technology [🌐]
- **Government Education Board Scholarship** *2011, 2014, 2017, 2019*
  Dhaka Board

Projects

- **Rent and Run: [A car rental website]** *September 2023*
  Tools: [ASP.NET (MVC), C#, JavaScrpit, HTML, CSS, MSSQL, Visual Studio] [GitHub]
  - Designed and developed a fully functional car rental website using the ASP.NET MVC framework with a front-end developed in HTML, JavaScript, and CSS, and a back-end powered by C# programming language and Microsoft SQL Server as database. Key features include vehicle booking, user authentication, online payment integration, rental management, and a responsive user interface.
- **Requisition Management System: [Desktop Application for managing supplies in Chain Shops]** *February 2023*
  Tools: [Java, Java Swing, MSSQL, Netbeans] [GitHub]
  - Developed a desktop application for managing supplies in a chain store from a warehouse. The system is built with Java Swing for the user interface and Microsoft SQL Server for database management. Key features include real-time order handling, inventory tracking, requisition processing, and streamlined reporting. The application aims to optimize supply chain management by automating and simplifying the requisition process, reducing manual work, and improving efficiency.
- **Helpmate: [All-in-One Android App that integrates essential online services]** *September 2022*
  Tools: [Kotlin, Firebase, Android Studio] [GitHub]
  - Developed an all-in-one Android application that integrates essential online services, including transportation, education, emergency, health, and job services. The app was built using Android Studio with Kotlin for the front-end development and Firebase for real-time database management and authentication. The project aimed to provide users with seamless access to a variety of services, enhancing convenience and accessibility.

- **Road to Triumph: [A word typing game with interesting features]** *October 2021*
  Tools: [C, C++, OpenGL, iGraphics, Visual Studio] [GitHub]
  ◦ Developed a word typing game inspired by bubble shooting and basic typing games. The game was implemented using C/C++ along with OpenGL for graphical rendering and iGraphics library functions. The project involved creating dynamic and visually appealing user interfaces, handling real-time input processing, and ensuring smooth game mechanics. The goal was to enhance typing speed and accuracy in a fun, engaging environment.

Research Experience

- **Algorithmic Trading and Machine Learning for Profit Maximization - A Case Study on Dhaka Stock Exchange**
  Mentors: Professor Dr. Mohammad Shafiul Alam (Ahsanullah University of Science and Technology)
  ◦ Research on stock price prediction, divergence detection in the daily chart using custom algorithms and identifying its type. Build some treading strategy based on technical indicators and perform back-testing on historical data.
- **Beyond the Laughter: Detecting Hatefull Memes with Deep Learning**
  Mentors: Md. Tanvir Rouf Shawon, Mr. Rayhan Tanvir (Ahsanullah University of Science and Technology)
  ◦ Conducted research on the MUTE multimodal hate speech dataset, which includes hateful memes (images and captions).Applied deep learning models to both visual and textual data, evaluating them individually and in combination (multimodal approach). Compared performance metrics across different models. Summary of findings available here.
- **Assessing Credit Risk of Bank Customers using Machine Learning Algorithms**
  Mentors: Mr. Faisal Muhammad Shah, Md. Zahid Hasan (Ahsanullah University of Science and Technology)
  ◦ This research focused on predicting which bank customers are likely to be risky in terms of credit repayment. Using a kaggle 'credit risk' dataset, advanced feature engineering techniques were applied to prepare the data, followed by training various machine learning models. The models were compared to evaluate their result in predicting which customers would be granted credit and which would be too risky. Summary of findings available here.
- **Classification of Forest Cover Type Based on Soil Characteristics using Machine Learning**
  Mentors: Dr. Md. Shamim Akhter, Mr. Md. Zahid Hasan, Mr. Md Rasheduzzaman (Ahsanullah University of Science and Technology)
  ◦ This research focused on classifying forest cover types based on soil characteristics through big data analysis. Exploratory Data Analysis (EDA) was conducted to uncover patterns in the data, and the PySpark library was employed to implement machine learning models. The study aimed to improve classification accuracy by handling large datasets efficiently. Summary of findings available here.
- **Detecting Covid19 and Pneumonia from Chest X-ray Images using Hybrid Deep Learning Models**
  Mentors: Md. Tanvir Rouf Shawon, Mr. Rayhan Tanvir (Ahsanullah University of Science and Technology)
  ◦ This research aimed to detect Covid-19 and pneumonia from chest X-ray images using custom deep learning models. Models like CNN, RNN, LSTM, BiLSTM, and a hybrid CNN + BiLSTM were applied, with the hybrid model outperforming the single models in accuracy and performance.
- **Stroke Risk Prediction using Machine Learning**
  Mentors: Mr. Mohammad Marufur Rahman (Ahsanullah University of Science and Technology)
  ◦ This research focused on predicting the risk of stroke using machine learning techniques. Various models were applied to analyze patient data and predict the likelihood of stroke occurrence, aiming to improve early detection and intervention by identifying high-risk individuals through data-driven insights.

Skills

- **Programming Languages:** Python, C, C++, Java, Kotlin, C#, JavaScript, HTML, CSS, PHP, Dart
- **Frameworks:** ASP.Net (MVC), React, Node.js, Django, Flutter, Laravel, Boostrap
- **Database Systems:** MSSQL, MySQL, Oracle, Apache Derby, Firebase
- **Data Science & Machine Learning:** Pandas, Numpy, Pytorch, PySpark, Scikit-Learn, Keras, Tensorflow
- **Technical Tools:** Git, LaTeX, MS Office, Google Workspace, Figma, Matlab

Professional Memberships

- **AUST Programming and Informatics Club**, Executive *2022 - 2024*
- **AUST Innovation and Design Club**, Executive *2021 - 2024*

Additional Information

Languages: Bengali (Native), English (Fluent)
Hobbies: Chess, Football, Tennis

References

1. **Dr. Mohammad Shafiul Alam**
   Professor, Department of Computer Science and Engineering
   Ahsanullah University of Science and Technology
   Email: shafiul.cse@aust.edu
   Relationship: [Thesis Supervisor, Course Teacher]