Yumna Islam

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 linkedIn | Github
Dhaka, Bangladesh

EDUCATION

- **Ahsanullah University of Science and Technology**   *2019 - 2023*
  B.Sc. in Computer Science and Engineering   Dhaka, Bangladesh
  ◦ CGPA: 3.81 on a scale of 4.00 (7th in merit position)

  ◦ Thesis Title: Using Automotive ECU and Computer Vision Based Image Processing for Vehicle Lane Keeping (Supervised by Prof. Dr. Kazi A Kalpoma)

RESEARCH INTERESTS

Computer Vision, Machine Learning, Human Computer Interaction, Natural Language Processing

PUBLICATIONS

[1] **Yumna Islam**, Farzad Azad, C.Z. Md Ruslan, C. Aye Mong Marma, and Kazi A Kalpoma. **A Lane Detection Framework for Automated Vehicle Using Computer Vision**. Published in *International Conference on Power Engineering and Intelligent Systems (PEIS 2023)*,Lecture Notes in Electrical Engineering, vol 1098, Springer, Singapore. (2024) DOI: https://doi.org/10.1007/978-981-99-7383-5_19

[2] Farhana Azad, **Yumna Islam**, C.Z. Md Ruslan, C. Aye Mong Marma, and Kazi A Kalpoma. **Efficient Lane Detection and Keeping for Autonomous Vehicles in Real-World Scenarios**. Published in *26th International Conference on Computer and Information Technology (ICCIT 2023), Cox's Bazar, Bangladesh. IEEE*, pp. 1–6. (2023) DOI: 10.1109/ICCIT60459.2023.10440972

RESEARCH EXPERIENCE

- **Undergraduate Thesis**   2022-2023
  Using Automotive ECU And Computer Vision Based Image Processing for Vehicle Lane Keeping   [🌐]
  ◦ Created a lane detection and lane keeping system using image processing pipeline and AURIX microcontroller for autonomous vehicles

  ◦ Implemented lane detection for five different weather conditions, achieving xx accuracy

- **Pattern Recognition Course Project**   2022
  Intrusion Detection Using Multiple Machine Learning Models   [🌐]
  ◦ Implemented several machine learning models, for example- Naïve Bayes, KNN, Clustering, etc for better accuracy in intrusion detection.

- **Natural Language Processing Course Project**   2022
  Authorship Attribution using Machine Learning models   [🌐]
  ◦ Used custom fine tuned LSTM, RNN like ML models for detecting authorship mainly from Bengali corpus (dataset-self-made).

PROJECTS

- **SIMS- Student Internship Management Systems**   *2021*
  Tools: Java Swing, MS SQL & PL/SQL   [🔗]
  ◦ Developed a database management system to manage student internship applications and company vacancies.

- **Fashion & Lifestyle Blogsite (ALOHA)**   *2021*
  Tools: HTML5, CSS, Javascript, PHP, MySQL with an ASP.NET version   [🔗]
  ◦ Created a fashion blog website, enabling users to interact with moderated content.

- **Cooling Load Prediction of a Building]**   *2022*
  Tools: Python, Matplotlib, Google Colab   [🔗]
  ◦ Conducted predictive analysis using Python to compare the performance of four machine learning models-linear regression, SVM, KNN and random forest on building cooling load data.

- **Covid19 Vaccine Management System**   *2022*
  Tools: Android Studio, Java, MS SQL   [🔗]
  ◦ Developed an Android app streamline vaccination scheduling based on user-provided details like age, location, and health.

- **Blind Stick**   *2022*
  Tools: Arduino UNO, C++   [🔗]
  ◦ Engineered a low-cost smart blind stick using a microcontroller, sonar, buzzer and LED to assist the visually impaired by detecting obstacles.

SKILLS

- **Languages:** Python, Java, C, C++
- **Web Design & Development:** HTML5, CSS, Bootstrap
- **Databases:** MySQL, MS SQL
- **Design Tools:** Google Colab, Jupyter Notebook, Netbeans, Microsoft Visual Studio, MATLAB, LaTeX
- **Data Science & Machine Learning:** NumPy, Pandas, Scikit-learn, Pytorch, Keras
- **Research Skills:** Data Analysis, Written Communication, Team Collaboration

STANDARDIZED TEST SCORES

IELTS Academic February 2024

Reading	Listening	Writing	Speaking	Overall
8.5	8	7	7	7.5

INDUSTRIAL EXPERIENCE

- **Software Engineer (Test)[⊕]** *Feb 2025 - Present*
  Meghna Bank Ltd Dhaka, Bangladesh
  ◦ Performed UAT, API test case writing and testing of web portals to ensure system stability and business alignment.
  ◦ Collaborated with project managers, developers and business teams for defect tracking, reporting and timely issue resolution.

- **QA Associate [⊕]** *Oct 2023 - August 2024*
  Nagad Ltd Dhaka, Bangladesh
  ◦ Conducted UAT, regression, UI/UX, and exploratory testing for 5 mobile and web platforms, improving product quality and user experience.
  ◦ Reported and tracked software bugs, working closely with cross-functional teams to ensure rapid defect resolution for a major fintech project.

- **Technology Intern (SQA) [⊕]** *Oct 2023 - August 2024*
  Nagad Ltd Dhaka, Bangladesh
  ◦ Learned SDLC and STLC processes while writing and executing test cases for live projects.
  ◦ Performed hands-on testing and bug reporting, contributing to the validation and improvement of mobile and web applications.

AWARDS & INVOLVEMENT

- **Dean's List of Honor (Based on B.Sc Result)** 2023
  Ahsanullah University of Science and Technology
- **Supervised Machine Learning: Regression and Classification** 2024
  Coursera [⊕]
  ◦ Skills: Build & train supervised machine learning models for prediction & binary classification tasks, including linear regression & logistic regression.

- **Advanced Learning Algorithms** 2024
  Coursera [⊕]
  ◦ Skills: Tensorflow, Artificial Neural Network, Learning Algorithms, Machine Learning Model Development, Tree Ensembles

REFERENCES

1. **Prof. Dr. Kazi A Kalpoma**
   Professor, Computer Science & Engineering
   Ahsanullah University of Science and Technology
   Email: kalpoma@aust.edu
   Undergraduate Thesis Supervisor