AROWA YASMEEN

axy210047@utdallas.edu

PUBLICATIONS

LLM-Sentry: A Model-Agnostic Human-in-the-Loop Framework for Securing Large Language Models

2024 IEEE 6th International Conference on Trust, Privacy and Security in Intelligent Systems, and Applications (TPS-ISA). You can find the link to the project repo here.

Recent Research Progress on Ground-to-Air Vision-Based Anti-UAV Detection and Tracking Methodologies: A Review

2025 Drones, Volume 9, Issue 1

CSVC-Net: Code-Switched Voice Command Classification using Deep CNN-LSTM Network

2021 Joint 10th International Conference on Informatics, Electronics & Vision (ICIEV) and 2021 5th International Conference on Imaging, Vision & Pattern Recognition (icIVPR). You can find the link to the project repo here.

Achievement: Best Presentation Award

PROFFESIONAL EXPERIENCE

AI Engineer | Feb 2021 - May 2022 (40 hours/week)
Intelligent Machines Ltd - Dhaka, Bangladesh

Contributions:
- I have built a **Custom Optical Character Recognition (OCR) System** framework from scratch for Bengali, English, and Khmer languages. This project required extensive image processing, building a corpus for different languages, and building and optimizing multiple AI models.

- I also worked on **Keyword Spotting (KWS)** and **Automatic Speech Recognition (ASR)** projects. I have gained experience handling audio signal processing, optimizing, and building AI models to handle audio data and data analytics in this domain.

- I used to lead our **OCR projects**, and my team and I worked on expanding the service to include multiple official languages worldwide and scaling the service 10x.

- I was also in charge of overseeing the **Ethical AI** aspect of all the running projects. This gave me a holistic view of all the projects being developed in the company and whether they complied with ethical standards. Also, I learnt how to write better documentation to make the AI models and services being developed more explanable.

EDUCATION

University of Texas at Dallas - Texas, United States of America

PhD in Computer Science *(presently enrolled)*
- Joined in 2022 - CGPA: 3.67/4.00

Islamic University of Technology (IUT) - Gazipur, Bangladesh

B. Sc. in Computer Science and Engineering
- Class of 2020 - CGPA: 3.74/4.00

Sunnydale School - Dhaka, Bangladesh

- A levels in 2016 - 2A* and 1A
- O levels in 2014 - 7A* and 1A

Achievement: Cambridge *World Highest* Achiever for Pure Mathematics

ACHEIVEMENTS

- Champion of ICT idea contest powered by Bondstein
- Runners up of Nutrition Hackathon powered by Bangladesh ICT Ministry

ACADEMIC PROJECTS

- **Multiple Object Tracking (MOT)**
  - Used a combination of DETR (for detection) and DeepSORT (for tracking) to build an MOT system using python

- **Banglish - A Dataset for Bangla-English Code-switched Voice Commands**
  - Initiated and contributed to building an open-source dataset for the Bangla-English language set. You can find the dataset here.

- **Interactive UI design using eye gaze patterns**
  - A system built for my HCI course project using Adobe XD and python. It demonstrates using eye gaze to interact with computer screens. Link to the project here.

- **Facial Recognition system**
  - A custom Face Recognition system built using python as my Software Development course project. Link to the project is here.

SKILLS

- **Programming Languages**: Python, C++, C
- **Libraries:** Numpy, Pandas, Scikit-learn, Seaborn, Matplotlib, TensorFlow, PyTorch, OpenCV
- **Software:** MS Azure Architecture, Git, MS Visual Studio, Docker, MS Office, AutoCAD, Blender, MiniZinc, SQL
- **Soft Skills:** Persistence, Team Player, Leadership, Public Speaking, Conflict Management, Emotional Intelligence

I've included for you one of my live talks here.

REFERENCES

Dr. Ovidiu Daescu

Professor, Department Head, Department of Computer Science
The University of Texas at Dallas - Texas, USA
Email: daescu@utdallas.edu

Dr. Md. Hasanul Kabir

Professor
Islamic University of Technology - Gazipur, Bangladesh
Email: hasanul@iut-dhaka.edu
Phone: (+88 02) 9291254~59 Ext: 3275

Md. Rashedul Islam

Artificial Intelligence Engineering Team Lead
Intelligent Machines Ltd. - Dhaka, Bangladesh
Email: rashed@intelligentmachin.es
Phone: +880 152 149 6302