AROWA YASMEEN

axy210047@utdallas.edu

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PUBLICATION

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.

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, Matlab, Java, 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.