MD. ABU BAKAR SIDDIQ SAYEM

Address: Mistripara, 1224 Askarabad, Uttar-Agrabad, Chittagong.
Cell: +8801727327168, +8801825507837
Email: abssayemcse121194@gmail.com
Git: https://github.com/abs-sayem
LinkedIn: https://www.linkedin.com/in/abs-sayem-8a115a144
Research Gate: https://www.researchgate.net/profile/Md-Sayem-12

EDUCATION

Exam	Concentration /Major	Institute	Result	Passing Year
M.Sc. in Engg. (Postgrad)	CSE	Chittagong University of Science and Engineering	(-)	(Pursuing) (Aug 2022 – Present)
B.Sc. in Engg. (Undergrad)	CSE	International Islamic University Chittagong	3.513 (Out Of 4) (CGPA)	2019
H.S.C (Higher Secondary)	Science	Nowab Faizunnesa Govt. College, Laksam	4.00 (Out Of 5)	2013
S.S.C (Secondary)	Science	Laksam Pilot Govt. High School, Laksam	5.00 (Out Of 5)	2010

RESEARCH AND TEACHING EXPERIENCE

- **Research Assistant (RA)** **(2018 to Present)**
  Md. Khaliluzzaman's Lab
  Dept. of Computer Science and Engineering
  International Islamic University Chittagong
  Research Topics: Computer Vision (Human Activity Recognition), NLP (Machine Translation), Deep Learning (CNN, LSTM, Attention NN)

- **Teaching Assistant (TA)** **(June 2019 – October 2019)**
  Dept. of Computer Science and Engineering (CSE),
  International Islamic University Chittagong (IIUC).
  Duties: Lead discussion sections, tutorials or laboratory sections, Assisting students for solving coding problems, Assisting course teacher for developing teaching materials, checking students project and discuss about their projects, Giving feedback to the course teacher about students problems, Lab performance evaluation, Proctor examinations.

JOB EXPERIENCES

- **Software Engineer** **(November 2020 – Present)**
  Research and Development Team,
  Alchemy Software Limited.
  Duties: Analyze and stablish pipelines for various NLP tasks, Information extraction from text, sentiment analysis, Text generation, Question answering, Topic modeling, Exploratory data analysis, Teach machine to read, Attention based unsupervised chatbot.

THESIS & PUBLICATIONS

- **An Article** namely**- "HActivityNet: A Deep Convolutional Neural Network for Human Activity Recognition."** Published in December 2021 EMITTER International Journal of Engineering Technology 9(2):357-376.
  Link:https://www.researchgate.net/publication/357871345_HActivityNet_A_Deep_Convolutional_Neural_Network_for_Human_Activity_Recognition
- **A Publication** namely **-** "**Monitoring Harmful Sound Density and Light Intensity State in an Industrial Workplace**." Published in 2019 International Conference on Signal Processing and Communication (ICSC).
  Link: https://ieeexplore.ieee.org/document/8938314?arnumber=8938314
- **Undergrad Thesis -** "**A Modification of MiniVGGNet for Human Activity Recognition**."**-** A optimal Convolutional Neural Network architecture trained on 52K image frames of 7 classes having 99.5% training and validation accuracy.

PROJECTS

- **"Character Wise Text Generation" –** A generative model for text (character by character) using LSTM recurrent neural network with Keras in Python.
  Link: https://github.com/ABS-Sayem/nlp/tree/main/character_wise_text_generation
- **"Question Answering from Text" –** A simple Chatbot that import a text file and answer any questions related to the text in the file.
  Link: https://github.com/ABS-Sayem/nlp/tree/main/question_answering_from_text
- **"Working with PDF" –** Extract information from pdf file.
  Link: https://github.com/ABS-Sayem/nlp/tree/main/working_with_pdf
- **A Project** on **–** "Voice Activated Home Automation System." Presented in Techfest**-**2018, IIUC.
  Link: https://drive.google.com/open?id=1GI1jQ8GgIk0aSAktaL1omfeWCP90hYwd

MACHINE LEARNING COURSES

- **Neural Networks and Deep Learning** by **–** Coursera (deeplearning.ai **–** Andrew Ng)
- **Convolutional Neural Network** by **-** Coursera (deeplearning.ai **–** Andrew Ng)
- **Introduction to TensorFlow for Artificial Intelligence, Machine Learning and Deep learning** by **-** Coursera (deeplearning.ai **–** Andrew Ng)
- **Introduction to Deep Learning** by **-** Coursera (deeplearning.ai **–** Andrew Ng)
- **Natural Language Processing with Alice Xhao** by **-** PyOhio

TECHNICAL SKILLS

Programming Language – Python, C, C++.

Machine Learning – Classification, Regression, Prediction, Detection, Time Series Analysis, Recommendation System

ML Tools – Tensorflow, Keras, Colab, Pytorch, Opencv (cv2), Numpy, Pandas, Matplotlib

NLP – Basic Tasks (Tokenization, Lemmatization, Stemming, POS Tags, NER), Preprocessing, Cleaning, Sentiment Analysis, Word Embedding (Bag of Words, TF-IDF, Word2Vec,) Topic Modeling, Text Generation, Working on PDF.

NLP Tools – NLTK, Spacy, Gensim, RegEx, Keras

Neural Networks – CNN, RNN(LSTM), Attention NN, Transformer.

IDE/Editors – Visual Studio Code, PyCharm, Jupyter, Spyder, CodeBlocks, Notepad++.

Source Control - Github