MD. ABU BAKAR SIDDIQ SAYEM

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SKILLS

- **Programming Language –** Python, C
- **Machine Learning** – Tensorflow, Keras, Colab, Pytorch, Opencv (cv2), Numpy, Pandas, Matplotlib
- **Natural Language Processing** – NLTK, RegEx, Keras, Huggingface, Spacy, Gensim, Openai
- **Deep Learning** – CNN, LSTM, Encoder-Decoder, Transformer
- **Source Control -** Github

JOB EXPERIENCE

- **Alchemy Software Limited | Python, NLTK, RegEx, Keras, Huggingface, Openai**
  Software Engineer(R&D) | (November 2020 – Present)
  - **Chat as a Service** – A specific purpose extractive chatbot that takes text file (like- pdf, txt etc.), preprocess the text and gives the response of the user queries. It can understand the context of query.
  - **Data Analysis** – Collect raw data, Cleaning, Exploratory Data Analysis (EDA), Extract useful information.
  - **Extract Information** – Extract required and useful information from CV. (Worked on BdJobs CV).
  - **Finetune LLM** – Finetune Huggingface LLM model for Sentiment Classification, Information Extraction, Language Translation, Topic Modeling.
  - **Neural Machine Translation:** Build Encoder-Decoder architecture for Neural Machine Translation.
  - **Create Pipeline** – Analyze and create pipeline for specific task, like- Data Cleaning, Question-Answering, Sentiment Analysis, Text Generation, Machine Translation.

PROJECTS

- **Chat as a Service –** A chatbot service that can create response by extracting info. from text file (pdf/txt), translate English to Bangla and vice-versa, paraphrasing, summarization, check plagiarism, extract personal-identifiable info. like- name, email, phone, address.
- **Sentiment Analysis using BERT –** Analyze and Rate sentiment of sentences in any text using the BERT model 'bert-base-multilingual-uncased-sentiment'.
  Link: https://github.com/abs-sayem/nlp/tree/main/sentiment_analysis_using_bert
- **Total NLP –** Includes data cleaning, exploratory data analysis, sentiment analysis, topic modeling and text generation.
  Link: https://github.com/abs-sayem/nlp/tree/main/total_nlp-alice_xhao
- **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
- **Summarization using Transformer:** Build a summarization pipeline, summarize any text using transformer model.
  Link: https://github.com/abs-sayem/deep_learning/tree/main/summarization
- **Machine Learning Projects –** Some ML projects related to – regression analysis, classification, prediction, detection, recommendation, time-series analysis.
  Link: https://github.com/abs-sayem/machine_learning/tree/main/ml_projects

- **A Project** on – "Voice Activated Home Automation System." Presented in Techfest-2018, IIUC.
  Link: https://drive.google.com/open?id=1GI1jQ8GgIk0aSAktaL1omfeWCP90hYwd

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
- **Object Oriented Programming with Python –** freeCodeCamp.org
- **Machine Learning for Everybody -** freeCodeCamp.org

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 Conference Paper** 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

EDUCATION

- **M.Sc. in Engg. | (Pursuing) |** Computer Science and Engineering | International Islamic University Chittagong
- **B.Sc. in Engg. | 3.51 | 2019 |** Computer Science and Engineering | International Islamic University Chittagong

INTERESTS

Travel Around | Self-Improvement | Nutrition | Economy