

Md. Motahar Mahtab

Donia, Dhaka-1236

+8801869977076 | md.motahar.mahtab@g.bracu.ac.bd | github.com/MotaharMahtab | linkedin.com/in/motahar-mahtab/ | MD. MOTAHAR MAHTAB

Education

Bachelor's Degree in Computer Science and Engineering; CGPA: 3.99

BRAC University

Dhaka, Bangladesh

May 2018 - May 2022

Higher Secondary Certificate (HSC); GPA: 5.0

Notredame College

Dhaka, Bangladesh

2015-2017

Notable Publications

BanglaBait: A Bangla Clickbait Detection Dataset for Identifying Clickbaits in Bangla News Articles - Journal Paper

Guimarães (Portugal)

19th International Conference on Distributed Computing and Artificial Intelligence

2022

- Listed as First Author
- First Bangla Clickbait News Article Dataset containing 15,056 data instances, each containing article title, content, clickbait/non clickbait label, article source, article category, article publish-time, translated English title and content.
- Investigated with various semi-supervised learning methods and compared it with supervised learning methods to prove the former's superiority.

A GAN-BERT Based Approach for Bengali Text Classification with a Few Labeled Examples

Guimarães (Portugal)

19th International Conference on Distributed Computing and Artificial Intelligence

2022

- Trained state-of-the-art Transformer networks in adversarial fashion using Generative Adversarial Network (GAN) to achieve superior performance when labeled dataset size is too small.
- First Bangla Paper to investigate the application of GAN-BERT on Bangla text classification tasks

Comparative Analysis on Joint Modeling of Emotion and Abuse Detection in Bangla language

GPCET, Kurnool, India

5th International Conference on Advances in Computing and Data Sciences

2022

- A comparative analysis of different researches made on detecting emotional and abusive Bangla language
- Present the best approach that tailors certain attributes of emotional and abusive language detection with respect to their prognosis performance and their implementation toughness in Bangla lingo.

Work Experience

GigaTech, BEXIMCO

Dhaka, Bangladesh

Machine Learning Engineer

Aug 2022 - present

- Created a multi-task named entity recognition (NER) and Parts of Speech (POS) model that achieved state-of-the-art results in Bangla language by efficiently using external context from Wikipedia. Used Pytorch Profiler to reduce bottlenecks, Nvidia TensorRT to optimize the model and deployed this optimized model using Nvidia Triton Inference Server (TIS).
- Created pre-training scripts to train state-of-the-art language models like GPT2, BERT, ELECTRA, RoBERTa using Distributed Data-Parallel (DDP) strategy on multiple GPUs.
- Collaborated with linguists to develop the tagset guidelines of Named Entity recognition, Parts of Speech and Lemmatization for Bangla language to facilitate large-scale annotation of Bangla Natinal Corpus(bdNC).

Qatar Computing Research Institute (QCRI)

Dhaka, Bangladesh

Research Assistant (Remote)

September 2021 - December 2021

- Pretrained a HuBERT model on Bangla ASR dataset for joint task of speech and speaker recognition pipeline using SpeechBrain.
- Assisted in enriching existing open source Bangla ASR datasets by adding more scripted audion and correcting existing annotation.

BRAC University

Dhaka, Bangladesh

Teacher Assistant

Apr 2020 - Apr 2022

- Helped students with different coding assignments and helped teachers in checking scripts.
- Assisted students in conducting research in various fields and submitting papers into conference.
- Assisted Teachers in lab classes and helped students with different course materials during consultation hour.

Projects

Bangla Clickbait Detector App

2022

Web Application

- Demo app created as a part of research work on Bangla Clickbait Detection using GAN-Transformers. It takes a Bangla article title as input and outputs whether the title is a clickbait or non-clickbait along with the prediction probability score. GAN-Transformers is a Transformer network trained in generative adversarial training framework.
- Tools used: Pytorch, Streamlit, Node.js
- Project Link: <https://github.com/MotaharMahtab/Bangla-Clickbait-Detector-App>

Bangla Article Headline Categorizer App

2021

Web Application

- Can categorize Bangla article headlines into eight different categories - Economy, Education, Entertainment, Politics, International, Sports, National, and Science & Technology
- Models used: State-of-the-art Bangla ELECTRA model, Dataset used: **Patrika Dataset**. - contains **400k** Bangla news articles from prominent Bangla news sites.
- Tools used: Pytorch, Streamlit, Node.js
- Project Link: <https://github.com/MotaharMahtab/Bangla-Headline-Categorizer-App>

Vegetarian Recipe Maker App

2021

Web Application

- This web app allows users to view different vegetarian recipes, see their total calories, nutrients like protein, carbohydrate, fat and their ingredients.
- Users can create their own vegetarian recipes by mixing different ingredients available on the web app. They can also see the total nutrients and calories of their created recipe
- Tools used: Django, Bootstrap, Node.js
- Project Link: https://github.com/MotaharMahtab/django_vegetarian_recipe

EBRAC - Online Learning Platform

2019

Web Application

- A comprehensive online education platform where instructors can create different courses, upload course content, enrol students, see students' marks, prepare questions, take quizzes etc.
- Students can enrol in courses, view course contents, participate in exams and see results.
- Tools used: Django, Bootstrap, Node.js
- Project Link: <https://github.com/MotaharMahtab/ebzac>

Skills

Frameworks	NLTK, PyTorch, Tensorflow, PyTorch Lightning, Huggingface, OpenCV, OpenMMLab, Keras, FastAI, Ray Tune, Wandb, TensorBoard, Pandas, Matplotlib, Seaborn
Tools	REST API, Flask, Flask-RESTful, Streamlit, Google Kubernetes, Docker, Cortex, GIT, Django, NodeJS, Google Cloud Platform, Amazon SageMaker, Tableau, Microsoft Office
Programming	Python, C/C++, JavaScript, SQL, Bash, JAVA, HTML/CSS, SQL.

Awards & Achievements

2019	Winner , BRACU Intra University Programming Contest	BRAC University Computer Club
2020-2022	Merit Scholarship Award , BRAC University	BRAC University

Referee

Mr. Annajiat Alim Rasel	Senior Lecturer, BRAC University. Email: annajiat@bracu.ac.bd
Mr. Mujtahid Al-Islam Akon	Graduate Teaching Assistant, Penn State University. Email: mujtahid.akon@psu.edu