

# Arshadul HOQUE



## PROFILE SUMMARY

Computer Science graduate with a strong foundation in data science and machine learning. Proficient in Python, SQL, and deep learning frameworks like Pytorch and scikit-learn, with hands-on experience in projects like sentiment analysis and house price prediction. Competed in Kaggle’s automatic essay scoring challenge and gaining practical experience in natural language processing. Eager to apply analytical skills and innovative thinking in an entry-level data science position to drive impactful insights and results.

## CONTACT DETAILS

@ ahsbd95@gmail.com  
📞 +88 018 53 11 63 64  
🌐 <https://shorturl.at/VQAfP>

## PERSONAL INFORMATION

Citizenship: **Bangladeshi**  
Languages: **Bangla, English, German**

## SKILLS

- Python, Statistical Analysis
- Machine Learning, Deep Learning, Natural Language Processing
- Pandas, Numpy, Matplotlib, Seaborn
- Microsoft Excel, SQL

## EXPERIENCE

RESEARCH ASSISTANT at *University of Chittagong* **2023–Present**

- ◇ Developed a transformer-based model leveraging BanglaBERT for multi-label classification of sentiment (positive, neutral, negative) and sarcasm (sarcastic, non-sarcastic) on social media data related to Bangladesh Cricket.
- ◇ Applied advanced techniques such as **multilabel stratified k-fold cross-validation**, **class weights adjustments**, and **focal loss** to address severe data imbalance, achieving a significant increase in F1 scores for underrepresented classes.
- ◇ Designed and implemented a **comparison study with previous models**, demonstrating superior performance, especially in sarcasm detection.

NLP CHALLENGE COMPETITOR: KAGGLE ESSAY SCORING at *Kaggle Competition: Automatic Essay Scoring* **Apr 2023 - Jul 2023**

- ◇ Participated in a Kaggle competition focused on developing **machine learning models** for **automatic essay scoring**.
- ◇ Explored various **loss functions**, **language models** and **memory optimization techniques** to enhance **accuracy** and **efficiency** by learning from shared insights and approaches of the community of data scientists.
- ◇ Implemented the **DeBERTa** model due to its impressive performance in the **text classification tasks**.
- ◇ Ranked 2141 out of 2706 participants.

## EDUCATION

BSC. ENGINEERING DEGREE IN COMPUTER SCIENCE AND ENGINEERING from *University of Chittagong*. **2016–2022**

## CERTIFICATIONS

- ◇ MACHINE LEARNING SPECIALIZATION, *DeepLearning.AI and Stanford University on Coursera*. **June 2023**
- ◇ DEEP LEARNING SPECIALIZATION, *DeepLearning.AI on Coursera*. **September-2024**
- ◇ EXCEL SKILLS FOR BUSINESS: ESSENTIALS, *Macquarie University on Coursera*, **June-2022**
- ◇ SQL FOR DATA SCIENCE *University of California on Coursera*, **February-2023**

## REFERENCES

Md. Ashikul Hosen Sagor Software Engineer Miaki Media Ltd <a href="mailto:sagor.ashikul@gmail.com">sagor.ashikul@gmail.com</a>	Dr. Tanzilur Rahman Assistant Professor KFUPM <a href="mailto:tanzilur.rahman@kfupm.edu.sa">tanzilur.rahman@kfupm.edu.sa</a>
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