Research Interests: My research interests encompass intelligent speech analysis, focusing on speech enhancement, automatic speech recognition, and text-to-speech (TTS) synthesis within multimedia contexts. I'm particularly interested in applying deep learning, transfer learning, and adversarial learning techniques to enhance human-machine interaction through acoustic scene analysis.

Education

Lanzhou University of Technology, Lanzhou, Gansu, China

Sep 2021 - Jul 2025

Bachelor of Science in Computer Science and Technology, Chinese Taught

Result 78/100

• Course Work: C/C++, Database, System Design, ML, NLP, Image Processing, Big Data Technology.

Phitron.io, Dhaka, Bangladesh

Sep 2022 - Dec 2023

CS Fundamentals With Phitron (online)

Result 92/100

- **Course Work:** *C/C++, DSA, OOP with Python, SQL, Software Engineering, Machine Learning.*
- Completed 5 Software Engineering Projects
- Solve 500+ coding problem
- Top 3% of the class

Research Experience

Research Assistant

Jan 2025 - Present

Department of Materials Science and Engineering

Lanzhou University of Technology

- Applying ML to optimize biocompatible polymer selection for advanced membrane technology.
- **Responsibilities:** Data preprocessing, feature engineering, model training and validation.
- Current focus: Data preprocessing and feature engineering techniques.

Research Contributions

- **Rahaman Nagiur**, Al-Muqaddam Anas, Khudyanzarov Shokhzodjon, Shamalik Garlyyev, Hussien Mohammed (2024), *Fine-tuning pre-trained language models for grammatical acceptability, correction, sentiment analysis, and emotion detection*. International Journal of Research in Advanced Engineering and Technology, 10(2), 42-49. ISSN:2455 0876.
- Rahaman Nagiur, Perfilev Dmitrii (2024), Navigating the DevOps landscape: Insights and perspectives. International Journal of Research in Advanced Engineering and Technology, 10(1), 27-29. ISSN: 2455-0876.

Technical Strengths

- **Research Methodology:** Proficient in research methodology (literature review, study design, technical writing). Expertise in applying machine learning techniques.
- **Programming Languages:** (Proficient) Python, JavaScript, SQL, (Familiar) C/C++, Java, and Bash.
- o Libraries and Tools: TensorFlow, PyTorch, Pandas, Scikit-learn, Node.js, Git, and Linux.

Achievements and Awards

 Winner of "Outstanding Student Award" - Lanzhou University of Technology 	2023
 Winner of "Outstanding Student Award" - Lanzhou University of Technology 	2022
 Winner of "President Scholarship" - Lanzhou University of Technology 	2021

Key Projects

Fine-tuning Pre-trained for Writing Improvement

NLP, transformer

https://github.com/nagiurDev/grammar-sentiment-emotion-analysis

- o Datasets: CoLA, Lang-8, SST-2, GoEmotions
- Models: RoBERTa (base), FLAN-T5 (base)
- o Challenges: Optimizing pipeline for multiple, potentially conflicting objectives.
- **Key achievements:** Balancing task-specific optimization in multi-task learning.

News Classification

NLP, Web Scraping, Data Preprocessing

https://github.com/nagiurDev/news-classification

- O Scrapes news data from People.cn.
- Cleans, preprocesses, and explores the news data.
- o Builds and evaluates an SVM model for news classification.
- Uses Jupyter notebooks for data processing and model building.

SST-2 Sentiment Analysis Comparison

NLP, Fine-tuning, Benchmarking

https://github.com/nagiurDev/sst2-sentiment-analysis-comparison

- Compares BERT, DistilBERT, and RoBERTa for sentiment analysis.
- Uses the SST-2 dataset for benchmarking.
- Evaluate performance using accuracy and F1-score.
- Provides code and results for reproducibility.

Leadership

AI Study Club, Lanzhou University of Technology

Oct 2023 - Dec 2023

Responsibilities

- Led a weekly AI study club for international PhD, Master's, and undergraduate students.
- Planned and delivered 10-weekend workshops.
- The workshops cover core AI concepts.
- Responsible for topic selection, presentation preparation, and workshop promotion.

Languages

Bangla (Native)

Chinese (HSK-5)

English (Fluent)

Additional Relevant Courses

Ethics in ResearchDataSkool

o TinyML and Efficient Deep Learning Computing

MIT

MIT 6.S191 Introduction to Deep Learning

MIT