RAHAMAN NAGIUR — 纳吉

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Research Interests: Quantitative methods and machine learning in NLP or CV, with interest in LLM agent applications. Skills include statistical modeling, Python data analysis, and experimental design. Seeking challenging projects with large datasets.

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 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.

Strengths

Research Skills

- **Research Methodology:** Literature Review, Study design, Research process, Technical writing.
- **Machine Learning:** Data Handling, Model Training (supervised, unsupervised, reinforcement learning), Model evaluation (precision, recall, F1 score), Cross-validation, feature engineering.
- **ML Techniques:** Named Entity Recognition (NER), Relation Extraction (RE), Text Classification, Sentiment Analysis, Text Summarization, Image Classification, Object Detection, Image Segmentation, Feature Extraction, Image Enhancement.

Technical Skills

- **Programming Languages:** Python, JavaScript, C/C++, SQL, Java, Bash.
- **Machine Learning:** TensorFlow, PyTorch, Pandas, SpaCy, Sci-kit-learn.
- **Development:** Node.js, Reactjs, Nextjs.
- **Other Skills:** Git, Cloud computing, Linux, LaTeX, Docker, PostgreSQL.

Research Projects

Develop an NER Dataset with Entity Relationships **Dec 2024 - Presents**
Keywords: *NLP, NER, RE, Corpus* *Ongoing*

- Creating a South Asian business/economy NER dataset.
- Designing an annotation schema and taxonomy.
- Developing and evaluating state-of-the-art NER models.
- Currently focusing on data collection.

Fine-tuning Pre-trained Language Models for Writing Improvement **Oct 2024 - Dec 2024**
Keywords: *NLP, grammar correction, sentiment and emotion analysis, transformer* *Completed*

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

Key Projects

News Classification **NLP, Web Scraping, Data Preprocessing, ML**
https://github.com/nagiurDev/news-classification

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

DELF Image Search **CV, DELF , Image Search, ML**
https://github.com/nagiurDev/DELF-image-search

- This project performs image similarity search using the TensorFlow Hub DELF module.
- It leverages DELF's powerful feature extraction for accurate image comparisons.
- The code is structured for modularity, testability, and easy extension.

Historical Photo Restoration with ESRGAN **CV, ESRGAN, Image Restoration, ML**
https://github.com/nagiurDev/historical-photo-restoration-ESRGAN

- Restored degraded historical photographs using a fine-tuned ESRGAN deep learning model.
- Improved image quality significantly.
- Successfully addressed common degradations like noise, scratches, and fading.

Parking Spot Detection Dataset **CV, Object Detection, YOLO, ML**
https://github.com/nagiurDev/parking-spot-dataset

- Creates a parking spot detection dataset from video.
- Includes annotated images for YOLO model training.
- Provides preprocessing scripts, augmentation, and evaluation tools.
- Dataset organized in YOLO format (train/validation/test).

SST-2 Sentiment Analysis Comparison **NLP, Fine-tuning, Benchmarking, ML**
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.

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*

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 Research** *DataSkool*
- **Statistics with Python** *DataSkool*
- **MIT 6.S191 Introduction to Deep Learning** *MIT*

Workshops and Seminars

NVIDIA Deep Learning Institute (DLI) Workshops **Lanzhou University of Technology**
Fundamentals of Deep Learning *Dec 30, 2024*

- Proficient in CNNs, RNNs, backpropagation, and optimization algorithms (e.g., Adam, SGD).
- Skilled in model evaluation metrics and using PyTorch.
- Understands key concepts of neural networks and deep learning architectures.
- Experienced in building and training basic deep learning models.

Generative AI with Diffusion Models *Dec 31, 2024*

- Trained and fine-tuned diffusion models (Stable Diffusion, DDPM) using PyTorch.
- Generated high-quality images and evaluated their quality.
- Experienced with large datasets for diffusion model training.
- Completed extensive hands-on practice.