K.M. Tousif Bin Parves

Recent ICT Graduate — Researcher in NLP, LLMs, and AI
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RESEARCH INTERESTS

Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Instruction-Tuning, Arabic NLP and Cultural Alignment, AI Safety and Evaluation

EDUCATION

Comilla University, Comilla, Bangladesh — 2020 — 2024
Bachelor of Science: Information and Communication Technology — GPA: 3.7/4.0
Thesis Title: *Academic Assistant: A Robotic System Powered by Retrieval-Augmented Generation and Fine-Tuned LLMs for Interactive Learning*

ACADEMIC EXPERIENCE

Comilla University — Comilla, Bangladesh
Undergraduate Researcher — 2023 — 2024

- Developed and tested an academic assistant powered by DeepSeek 1.5B using RAG and LangChain.
- Designed a multi-stage retrieval pipeline and conducted usability evaluation.
- Worked on instruction-tuning datasets and chatbot fine-tuning.

Comilla District Commissioner Office — Comilla, Bangladesh
Programming & Robotics Instructor — 2022 — 2023

- Conducted technical sessions on robotics and Python programming in 13 institutions.
- Trained 300+ students and improved communication and delivery methods.

PROJECTS

AI Academic Assistant — Comilla, Bangladesh
Lead Developer — 2023 — 2024

- Integrated DeepSeek 1.5B with RAG pipelines using LangChain for personalized student Q&A.
- Focused on cultural relevance and usability testing through feedback loops.

Robot Niko (3D Printed Humanoid) — Comilla, Bangladesh
Robotics Developer — 2022 — 2023

- Created a 3D-printed humanoid robot using ROS2, MoveIt, and Raspberry Pi.
- Implemented joint planning and autonomous navigation modules.

Inventory Management System using YOLOv8 — Comilla, Bangladesh
AI Engineer — 2023

- Built a real-time detection system for Daraz inventory with 82% mAP.
- Improved efficiency in package sorting and alert-based stock tracking.

PUBLICATIONS

Conference Paper

- Tousif, K. M. *Explainable AI-Driven Birth Weight Prediction: A Feature Optimized Ensemble Regression Approach for Neonatal Health Insights*, Submitted to the 2nd International Conference on Next-Generation Computing, IoT and Machine Learning (NCIM-2025), Track: Artificial Intelligence and Machine Learning, Paper ID: 637. [Submission Created]

AWARDS

Innovation Project Showcase Winner — Comilla, Bangladesh
Awarded for GPS Tracking System by UGC & Comilla University — 2024
Hult Prize Runner-up — Comilla, Bangladesh
Presented food security startup solution — 2021

MUN Special Mention Noakhali, Bangladesh
Delegate of Spain, IEA Committee 2020
Line Follower Robot Competition Runner-up BAIUST
2023

OTHER EXPERIENCES

General Secretary, CoU IT Society (CoUITS) *Comilla, Bangladesh*
Leadership Role *2024 – Present*

- Partnered with DataCamp to secure 600 scholarships for 100 students.

TEDx Co-Organizer, Comilla University *Comilla, Bangladesh*
Operations Lead *2024*

- Managed logistics and speaker engagement for university's first TEDx event.

ENGLISH TESTS

IELTS (Academic): Overall Band 7.5
Listening: 8.0 Reading: 7.5 Writing: 6.5 Speaking: 7.0
Test Date: 04 2024

SKILLS

- **Programming:** Python, C++, Bash
- **Frameworks:** PyTorch, TensorFlow, Hugging Face, LangChain
- **Tools:** Git, Google Colab, Notion, Jupyter
- **Soft Skills:** Communication, Leadership, Team Collaboration, Critical Thinking

REFERENCES

Dr. Md. Tofael Ahmed
Associate Professor, Department of ICT, Comilla University, Bangladesh
E-mail: tofael@cou.ac.bd
Scholar Profiles: Google Scholar