Talha Jobayer Zihan

jobayertalha2020@gmail.com • +8801721577792 • linkedin.com/in/talha-jobayer • github.com/jobayertalha • My Portfolio

SUMMARY

AI/ML Engineer and CSE graduate from RUET with hands-on experience building and deploying end-to-end ML systems, including RAG pipelines and PyTorch models served through FastAPI and React applications. Author of two IEEE-published NLP research papers.

EXPERIENCE

Research Intern, ELITE Research Lab Jun 2026 – Present

- R&D in **AI and Machine Learning**: literature review, model development, and experimentation.

Industrial Training, Netro Systems Rajshahi | 2 Weeks

- Used industry-standard development tools and collaborated with developers on real projects.

Industrial Attachment, Frontier Semiconductor BD Ltd Dhaka | 2 Weeks

- Observed semiconductor fabrication processes and quality control.

PROJECTS

TechyAgent | Python, Streamlit, LangChain, Groq, SQLite, Chroma GitHub | Live

- Built a natural-language SQL assistant that converts user questions into read-only database queries for intuitive business data exploration with correctly evaluation of its own answer in short LLM as judge
- Developed an interactive dashboard integrating SQL analytics, semantic few-shot retrieval, and evaluation of answer correctness and groundedness.

CareerVector | Python, Streamlit, LangChain, FAISS, HuggingFace, Groq GitHub | Live

- Developed CV analysis and job-description matching workflows with skill-gap insights, salary estimates, and personalized career recommendations with a quik quiz to understand own career path.
- Built a semantic CV-to-job matching system, reducing query latency by **80%** and improving top-1 precision by **35%** over a TF-IDF baseline.

ResearchFlow | React, Vite, FastAPI, SQLAlchemy, PostgreSQL GitHub | Live

- Built a research-focused task manager that enables researchers to organize multiple papers and manage paper-specific tasks through a unified dashboard.
- Integrated optional conference and deadline fields with automatic days-left calculations and work-pace indicators: Need to Hurry, Work Throughly.

Cross-Domain NIDS | PyTorch, FastAPI, React, TypeScript, Vite GitHub | Live

- Developed a cross-domain network intrusion detection platform for PCAP/PCAPNG traffic using transfer learning, Lopez17CNN, BiC (Bias Correction), and Target Domain Neighborhood Refinement (TDNR).
- Integrated an analyst dashboard for traffic uploads, threat visualization, and alerts; deployed on Vercel and Render.

Car Rental System Web App GitHub

- Built a full-featured car rental management system with **PHP and MySQL**; implemented User Dashboard with car browsing & booking history and Admin Panel for fleet & booking management.
- Integrated real-time booking with date validation and secure authentication using **HTML/CSS, JavaScript, and CRUD** operations.

RESEARCH WORK

Fast Gradient Method (FGM) Fine-Tuning for Bengali Sarcasm Detection IEEE Xplore

- Proposed FGM adversarial fine-tuning on BanglaBERT; presented at ICECTE 2026 (Certificate of Contribution).

Mental Health Text Classification via Data Augmentation and Transformer Ensemble IEEE Xplore

- Improved classification accuracy using data augmentation and transformer model ensembling.

TECHNICAL SKILLS

AI / ML: PyTorch, TensorFlow, Transformers, BanglaBERT, CNNs, RAG, LangChain, FAISS, NumPy, Pandas
Programming: Python, C++, C, Java, SQL, PHP
Web / Backend: FastAPI, React, Next.js, TypeScript, Vite, Tailwind CSS, HTML/CSS, JavaScript
Tools: Git, GitHub, Docker, Linux, Kaggle, MySQL, Arduino, Vercel, Render

EDUCATION

Rajshahi University of Engineering and Technology (RUET) 2022 – 2026
B.Sc. in Computer Science and Engineering CGPA: 3.64 / 4.00

New Govt. Degree College, Rajshahi 2018 – 2020
Higher Secondary Certificate (HSC) GPA: 5.00 / 5.00

CERTIFICATIONS

Machine Learning in Production (DeepLearning.AI) • NLP in TensorFlow (DeepLearning.AI) • Deep Learning & Reinforcement Learning (IBM) • Machine Learning with Python (IBM) • Intro to Neural Networks and PyTorch (IBM) • Agents Course (Hugging Face) • PHP (Laravel) Training – RUET CSE, EDGE (80 hrs)

LEADERSHIP & VOLUNTEERING

Officer – Marketing, TEDxRUET 2024 – 2025
Co-organized a TEDx event; managed marketing outreach and audience engagement.