HASEEB RAZA

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PROFILE SUMMARY

CS student at ELTE and aspiring researcher with hands-on experience in AI-integrated web development. Skilled in building intelligent, full-stack applications that combine modern web technologies with machine learning. Motivated to develop scalable, user-focused solutions at the intersection of software engineering and applied AI.

EDUCATION

BSc in Computer Science - Eötvös Loránd University (ELTE)   Expected June 2026

EXPERIENCE

AI Research Intern - ELTE, Faculty of Informatics   Jul 2025 – Present
- Designing an LLM pipeline to model qualitative data using RAG, prompt tuning, and assistant evaluation.
- Building a clustering pipeline with LLM embeddings and swarm-based reduction for semantic grouping.
- Comparing swarm-based clustering to PCA and t-SNE, improving model robustness to noisy user inputs.

Research Assistant - ELTE, Faculty of Informatics   Jul 2025 – Present
- Developing Python-based pipeline to estimate heart rate from BCG using smart ring accelerometer data.
- Extracting features from short signal windows using autocorrelation, peak detection, and motion filtering.
- Enhancing signal quality and accuracy by integrating skewness, kurtosis, and trial-based threshold tuning.

Web Development Intern - WaseerHost   June 2022 – Sep 2022
- Contributed to front-end designs using HTML, JavaScript and CSS while reducing customer complaints by 40%
- Revitalized website content and provided technical support for internal teams increasing efficiency by 30%.

Student Mentor – HÖOK (National Union of Students)   Jul 2023 – Jul 2024
- Guided 20+ international students through onboarding and technical systems to support academic integration.

PROJECTS

EngageMind – Personalized Conversational AI System Documentation   2025
- Built an end-to-end RAG system using Flask, React, FAISS, and GPT-2 for intelligent document-based Q&A.
- Implemented vector-based search and document ingestion with dynamic query rewriting using LangChain.

LLM-Document-Categorizer – Topic Discovery with Swarm Intelligence GitHub   2025
- Designed a modular pipeline for document clustering using embeddings, BERTopic, and Streamlit dashboards.
- Exploring swarm intelligence as a novel dimensionality reduction technique benchmarked against PCA and t-SNE.

Learning Management System GitHub   2025
- Developed a multi-role LMS with secure authentication, task tracking, and assignment submission features.
- Built using Laravel MVC and Tailwind CSS to create a responsive UI with dynamic, API-based workflows.

Digital Note-Taker Live Demo   2024
- Built a react based web app to securely manage and structure Markdown-based notes with user authentication.
- Integrated real-time updated and notes organization with database (MongoDB) for consistency and reliability.

SKILLS

Languages & Tools: Python, Java, C, TypeScript, SQL, HTML, CSS, JavaScript, Git, VS Code, IntelliJ
Frameworks & Libraries: React, Flask, Docker, REST APIs, LangChain, Transformers, BERTopic
AI & ML Technologies: PyTorch, Mistral API, RAG, Machine Learning, Prompt Engineering
Databases & Indexing: PostgreSQL, MongoDB, FAISS, PL/SQL, NoSQL
Soft Skills: Adaptability, Curiosity, Critical Thinking, Communication, Collaboration, Fast Learner

LANGUAGES

Urdu (Native), English (Fluent), Punjabi (Native), Hungarian (Basic).