Hamadullah Bijarani

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Summary

Computer Systems Engineering undergraduate at Sukkur IBA University (CGPA 3.48/4.00) with a research focus on Natural Language Processing, Large Language Models, and efficient AI, including parameter-efficient fine-tuning, model compression, and low-resource learning. Author of a published paper on energy-efficient NLP, with an ongoing benchmark study on structured low-rank adapters and hands-on experience building RAG and LLM-based systems for 50+ clients. Seeking a fully funded research-oriented Master's program in AI, ML, or NLP.

Education

Sukkur IBA University, Sukkur, Pakistan *August 2023–May 2027 (Expected)*
Bachelor of Engineering (B.E.) in Computer Systems Engineering **CGPA: 3.48/4.00**

- Relevant coursework: Machine Learning, Data Structures and Algorithms, Database Management Systems, Computer Architecture, Digital Logic Design, Object-Oriented Programming, Digital Signal Processing, Probability and Statistics
- Academic focus: Natural Language Processing, Large Language Models, Deep Learning, and efficient AI systems

Experience

Independent Researcher *2026–Present*
Self-directed research in NLP, AI for science, and AI architectures

- Conducting research in **NLP, Large Language Models, model compression, parameter-efficient fine-tuning, and low-resource learning**
- Developing a benchmark study on **structured low-rank adapters under low data and domain shift**, comparing LoRA, DoRA, and structured/tensor adapters at matched trainable-parameter budgets
- Studying Transformer architectures, attention mechanisms, and efficient adaptation methods with reproducible experimental practice

Freelance AI Automation & Agent Developer *2026–Present*
Fiverr Level 1 Seller | Remote

- Delivered AI, automation, and software solutions for **50+ clients** across LLM applications, RAG systems, and API integrations
- Built systems using **Python, LLM APIs, LangChain, RAG, n8n, REST APIs, webhooks, and vector databases**
- Developed workflows for information extraction, document processing, classification, summarization, retrieval, and tool calling

KPMG Australia *May 2025–Jun 2025*
Data Analyst Intern | Remote

- Developed Tableau dashboards and analytical workflows for business reporting and decision support
- Applied statistical analysis to identify trends, anomalies, and key performance indicators
- Automated routine data-processing tasks to reduce manual effort

Research Interests

- **NLP & Language Models:** Large Language Models, Transformers, Low-Resource and Multilingual NLP, Representation Learning
- **Efficient AI:** Model Compression, Knowledge Distillation, Quantization, Pruning, Parameter-Efficient Fine-Tuning, Efficient Inference
- **Related Areas:** Deep Learning, Generative AI, Retrieval-Augmented Generation, Statistical Machine Learning, AI Agents

Publications

[1] **Hamadullah Bijarani.** "Energy-Efficient NLP Through Tiny-Model Distillation, Pruning, and Quantized Inference." *Kashf Journal of Multidisciplinary Research*, 2026. [Article]

[2] **Hamadullah Bijarani.** "Do Structured Low-Rank Adapters Hold Up Under Low Data and Domain Shift?" *Manuscript in preparation*, 2026.

Research & Engineering Projects

Multiple-PDF Retrieval-Augmented Generation Chatbot [Code]

- Built an end-to-end RAG pipeline for question answering across multiple PDFs using parsing, chunking, embeddings, vector similarity search, and LLM-based generation
- Implemented with **Python, LangChain, FAISS, OpenAI API, and Streamlit**

AI Study Coach [Code]

- Developed an AI-assisted learning platform integrating document processing, semantic retrieval, conversational QA, quizzes, flashcards, and AI-generated learning content
- Implemented using **Python, Streamlit, SQLite, vector search, and LLM APIs**

Sentiment Analysis using LSTM [Code]

- Built an LSTM-based sentiment classifier with pre-trained word representations and a full preprocessing, training, and evaluation pipeline over **100K+ customer reviews**

Technical Skills

- **Programming Languages:** Python, C++, SQL, CUDA, MATLAB, Bash, LaTeX
- **Machine Learning:** PyTorch, TensorFlow, Keras, Scikit-learn, NumPy, Pandas, OpenCV
- **NLP & LLMs:** Transformers, Embeddings, Text Classification, RAG, Hugging Face, LangChain, FAISS, Unsloth, Model Fine-Tuning, Model Optimization, AI Agents
- **Tools & Environments:** Git, Linux, Docker, Jupyter, Google Colab, Streamlit, FastAPI, PostgreSQL, SQLite
- **APIs & Automation:** n8n, REST APIs, Webhooks, OpenAI API, Gemini API, Claude API

Conference & Technical Activities

- **Team Lead, PEC Generative AI Hackathon** – Led technical development of an AI-powered study assistant under a short deadline
- Participated in university-level programming and technical competitions

Honors & Awards

- **STHP Scholarship** – Recipient for academic excellence
- **Science Talent Farming Scheme (STFS) Scholarship** – Recipient for academic merit and talent

Specializations

- Machine Learning Specialization | DeepLearning.AI
- Deep Learning Specialization | DeepLearning.AI
- CS50's Introduction to Computer Science and Artificial Intelligence | Harvard / edX
- Generative AI Application Developer | Pakistan Engineering Council (PEC)