

Abdullah Hashmat

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EDUCATION

Lahore University of Management Science - BS Computer Science *Aug 2021-May 2025*
Relevant Courses: CS6304 Advanced Machine Learning, CS5302 Speech Processing with Generative AI, CS6303 Large Language Models, CS331 Artificial Intelligence, CS487 Cloud Development, CS437 Deep Learning

Beaconhouse Margalla Campus Islamabad *Aug 2017-May 2021*

TECHNICAL SKILLS & INTERESTS

Languages: English, Urdu

Technical Skills: Python, MERN, Java, C++/C, MATLAB, Haskell, React, LaTeX, Pytorch, AWS

Interests: Formula 1, Golf, Horse Riding, Applied Machine Learning, Data Science

PROFESSIONAL EXPERIENCE

German Research Center for Artificial Intelligence (DFKI) – Research Assistant *June 2025 – Present*

- Conducting ML based research in bioinformatics, focusing on molecular compound property prediction using advanced machine learning models to enhance drug discovery and chemical analysis pipelines.

Darcheeni (AIHI) – LUMS – MLOps Engineer *May 2024 – May 2025*

- Led backend integration for Sehat Sanjha, an AI speech to text assistant supporting real time physician interactions and patient triage, integrated RL based ML models for decision support and dynamic response generation
- Facilitated backend development using React, Redux, and Lambda functions, and integrated **100+** refined test cases

Delivery Hero (FoodPanda) – Sales Performance Intern *Jun 2024 – Aug 2024*

- Streamlined self-sign up funnel by identifying bottlenecks and refining the onboarding process, reducing QC rejection rate by **15%**
- Integrated Google APIs to automatically sort and upload data from Drive to Sheets, enabling systemised analysis and reducing manual data handling, increasing hourly throughput by **25%**
- Automated invoice distribution via WhatsApp using Python, reducing process time by **20%**

Pakistan Television Network – Data Science Intern *Jun 2023 – Jul 2023*

- Revamped and enhanced PTV World's ticker headline system using machine learning models for text similarity, resulting in **20%** reduction in headline overheads
- Built a predictive analysis model, enhancing viewer engagement metrics through data-driven content strategies by **10%**

PROJECTS/PUBLICATIONS

PakBBQ-A Culturally Adapted Bias Benchmark for QA [Paper Link](#) **(EMNLP 2025 Main Conference)** *Sept 2024 – May 2025*

- Developed PakBBQ, the first culturally adapted QA benchmark (17,180 examples in Urdu and English across 8 sociocultural bias categories) to evaluate social bias in multilingual LLMs within the Pakistani context
- Evaluated 6 multilingual LLMs under zero shot conditions, revealing cross linguistic bias gaps and demonstrating that disambiguation and negative framing significantly improved bias mitigation and accuracy

AI-Driven Stock Insights Platform with AWS & Claude Chatbot [Link](#) *Sept 2024 – Dec 2024*

- Developed and deployed an AWS-based stock data portal integrating S3, Lambda, ECS, and Neon Postgres for automated stock report processing and real-time trend analysis
- Built an AI chatbot to analyze trends and provide customer insights using LLM and custom prompting

Bias Mitigation in Deep Learning Models [Link](#) *Sept 2024 – Dec 2024*

- Implemented a multi-teacher single-student knowledge distillation framework to address inductive biases in deep learning, leveraging CNNs for texture and Vision Transformers for shape representation
- Designed space adapters for heterogeneous architectures, achieving a compact student model with superior generalisation on cue-conflict datasets under distributional shifts, resulting in **12%** less bias.

AI for All – Evaluating Transformer and LLM Models in Low Resourced Settings [Link](#) *Sept 2024 – Dec 2024*

- Evaluated open source LLM and transformer model's performance on low resource languages such as Urdu, Sindhi and Pashto. Tested jail breaking adversarial prompts with a success rate of up to **40%** in Llama 3-B.

End-End Data Science Chatbot using Generative AI [Link](#) *Jan 2024 – May 2024*

- Built an AI Data Science chatbot, aimed to perform intuitive statistical analysis, EDA and data cleaning, enhancing accessibility for users with limited Data Science knowledge
- Fined tuned Llama 3 to analyse data in **10+** supported formats, deployed on Hugging Face using Gradio

RESEARCH EXPERIENCE & TEACHING ASSISTANTSHIPS

Center for Speech and Language Technologies (CSaLT) – LUMS - Senior Research Intern *Aug 2023 – May 2025*

- Researched **10+** Large Language Models (LLMs) for low-resource languages, focusing on vulnerabilities to bias and jail breaking, while optimising speech processing models for Urdu NLP tasks
- Collaborated on language processing models, conducted literature reviews, and contributed to **4** research papers

LUMS – Full-time Teaching Assistant *Sept 2023 – May 2025*

- CS100 Computational Problem Solving, CS535 Machine Learning, CS5302 Foundations of Generative AI, AI600 Machine Learning for MS

LEADERSHIP EXPERIENCE AND CO-CURRICULAR ACTIVITIES

TechStars Startup Weekend, Lahore - Convenor *Jul 2022 – Mar 2023*

- Executed Startup Weekend Lahore 2023 in collaboration with National Incubation Center Lahore and Google for Startups, led workshops and partnered with top industry leaders for startup guidance and judging
- Managed a 54-hour event for over **40** startups and **150+** attendees across Pakistan, overlooking a team of 60 and securing **800k+** PKR in sponsorships

SPADES - Assistant Director (Socials and Operations) *Sept 2022 – May 2023*

- Led the organisation of PSIFI's flagship event, coordinating social function and concerts for over **1,400** attendees