








# TAHIR SHER (M.S Data Science)

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 [Google Scholar](https://scholar.google.com/citations?user=1011111)  
 [Huggingface](https://huggingface.co/tahirsher)






## Research Interest

Machine/ Deep / Federated Learning; LLMs & Gen AI; Data Science / AI; Mathematical / Statistical Modeling

## Education


- 2021 – 2023  **M.S Data Science, Air University, Islamabad, Pakistan**  
Thesis Title: *Deep Insights into Citation Patterns: Graph Attention Network Approach*  
CGPA – 3.71 / 4.0
- 2010 – 2012  **M.Sc. Mathematics, International Islamic University, Islamabad, Pakistan.**  
CGPA – 4.0 / 4.0 (**Gold Medalist, Distinction / Position Holder**)
- 2008 – 2010  **B.Sc. Mathematics (A, B), Physics, University of Punjab, Lahore, Pakistan.**  
1<sup>st</sup> division



## Research Collaboration Groups

- Group A  **Explainable Artificial Intelligence, Air University, Islamabad, Pakistan**  
[Associate Professor Dr. Imran Ihsan](#)  
Natural Language Processing, Machine Learning, Deep Learning
- Group B  **Communication, Sensing and Imaging Research Group, University of Glasgow, Scotland, UK**  
[Associate Professor Dr. Ahmad Zoha](#)  
Federated Learning, Adversarial Machine Learning, Mathematical Modelling
- Group C  **Hyper-Connectivity Convergence Technology Research Centre, Kyungpook National University, South Korea**  
[Assistant Professor Dr. Dongsun Kim](#)  
Machine Learning, Deep Learning, Mathematical / Statistical Modelling
- Group D  **Software Technology Research Centre, Kyungpook National University, South Korea**  
[Post Doctoral Researcher Dr. Abdul Rehman](#)  
Machine Learning, Deep Learning, Mathematical / Statistical Modelling

## Research Publications

### Published Journal Articles / Conference Proceedings

- 1 Tahir Sher et al. "Exploiting Data Science for Measuring the Performance of Technology Stocks". In: *Computer, Materials, & Continua*. **Research Group: A, C, D**. Oct. 2023.  DOI: 10.32604/cmc.2023.036553.

- 2 Habib Ullah Manzoor et al. "Layer Based Anomaly Aware FedAVG: A Lightweight Backdoor Attack Mitigating Aggregation Framework for Federated Learning". In: *IEEE PIMRC International Conference Utrecht, Netherland*. **Research Group: B**. Sept. 2023.  DOI: 10.1109/PIMRC56721.2023.10293950.
- 3 Tahir Sher, Abdul Rehman, and Dongsun Kim. "COVID-19 Outbreak Prediction by Using Machine Learning Algorithms". In: *Computer, Materials, & Continua*. Vol. 74. **Research Group: C, D**. Sept. 2022.  DOI: 10.32604/cmc.2023.032020.

### Submitted / Under-review Journal / In-Progress

- 1 Tahir Sher, Habib Ullah Manzoor, and Ahmed Zoha. "Adversarial Effects of Distributed Machine Learning Models for Diagnosis of Health Problems through Medical Imaging". In: *Elsevier, Computerized Medical Imaging and Graphics* (Oct. 2024). **In-Progress, Research Group: B**.
- 2 Imran Ihsan, Tahir Sher, and Azhar Imran Mudassir. "Graph Based COVID-19 Detection Using Conditional Generative Adversarial Network". In: *IEEE ACCESS* (Sept. 2024). **Submitted, Research Group: A**.
- 3 M Ahmad Hafeez et al. "Recommendation System using Collaborative Filtering". In: *Computer, Materials, & Continua* (Aug. 2024). **Submitted, Research Group: C, D**.
- 4 Tahir Sher et al. "Deep Insights into Citation Patterns: Graph Attention Networks Approach". In: *Concurrency and Computation: Practice and Experience* (June 2024). **Submitted, Research Group: A, C, D**.
- 5 Soud Ali et al. "Meta-verse System Implementation in Education: Challenges, Limitations, and a Systematic Literature Review". In: *IEEE Access* (Apr. 2024). **First Revision, Research Group: C,D**.
- 6 Tahir Sher, Abdul Rehman, and Dongsun Kim. "Advancing Traffic Safety: Empowering Advanced Driver Assistance Systems with Machine Learning-based Vulnerable Road User Detection". In: *Elsevier* (July 2023). **In-Progress, Research Group: C, D**.
- 7 Tahir Sher, Habib Ullah Manzoor, and Ahmed Zoha. "Anomaly Detection and Energy Consumption Prediction using Federated Learning Framework". In: *Springer* (July 2023). **In-Progress, Research Group: B**.

## Web Application Development using LLMs & Gen AI



Research Paper Finder & Text Summarizer	 Research Paper Search and Summary
GenAI Chatbot Text/Audio Response	 GenAI Chatbot Text/Audio Response
Secure Superstore Application	 Secure Superstore Application
AI Chatbot: Voice to Voice & Text	 AI Chatbot: Voice to Voice & Text
Movies Analysis: RAG-based Application	 Movies Analysis: RAG-based Application
Versatile App Text to Image Generator	 Versatile Text to Image Generator
Mental Health Chatbot	 Mental Health Chatbot
Legal Summarizer Application	 Legal Summarizer Application

## Web Application Development using LLMs & Gen AI (continued)


Cooking Recipe Generator        Cooking Recipe Generator

Graphic & Scientific Calculator        Graphic and Scientific Calculator







## Major Courses Studied

- M.S Courses        Machine Learning; Deep Learning; Natural Language Processing; Knowledge Graphs; Time Series Analysis; Big Data Analytics
- M.Sc Courses        Applied Mathematics; Differential Equations; Advance Algebra; Numerical Analysis; Complex Analysis ; Linear Algebra




## Online Courses Certification

Cyber Security Analytics        Leading Edge Skills, California, USA

## Skills

- Data Analysis Tools        Tableau, Power BI, Rapid Miner, Weka, MS Excel
- Coding        C, C++, [Python](#), [PySpark](#), [L<sup>A</sup>T<sub>E</sub>X](#), [Large Language Models and Generative AI](#), MATLAB, and Mathematica
- Deployment of Applications at Clouds        Stream lit Cloud, GroqCloud, Gradio, HuggingFace
- IELTS        The test conducted on [10 June, 2023](#) and achieved Band 6.0 as well as English proficiency certificate is also obtained from Last Attending University
- Languages        Strong reading, writing and speaking competencies for English and Urdu.
- Misc.        Academic research, teaching, training, consultation, MS Office, [L<sup>A</sup>T<sub>E</sub>X](#) typesetting, and publishing.

## Employment History

- Sep, 2013 – Sep, 2024        **Lecturer**, Pakistan Air force School & Colleges
-     Managing Organizational Seminars as well as Conferences
- Sep, 2024 – to date        **Lecturer**, Air University, Islamabad, Pakistan

## Miscellaneous Experience

### Awards and Achievements



- 2012        [Gold Medalist](#), M.Sc Mathematics
- 2011-2012        **Partial Scholarship**, M.Sc Mathematics

## Miscellaneous Experience (continued)







### Certification

- 2012     **Distinction Certificate**, M.Sc Mathematics  
 **Position Certificate**, M.Sc Mathematics

### Volunteer Work

- Feb, 2024 – to date     **Cyber Security Analyst**, Leading Edge Skills, California, USA  
[Associate Trainer](#)
- Apr, 2024 – to date     **Data Analyst**, Leading Edge Skills, California, USA  
[Associate Trainer](#)

### References

- Dr. Imran Ihsan     **Associate Professor**  
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- Dr. Aman Ullah Yasin     **Associate Professor**  
Head of Department  
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- Dr. Ahmad Zoha     **Associate Professor**  
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- Dr. Azhar Imran Mudassir     **Assistant Professor**  
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- Dr. Syed Muhammad Usman     **Assistant Professor**  
Department of Creative Technologies Air University, Islamabad, [Pakistan](#).  
Mobile: 92 332 0615294;      Email: [syed.usman@mail.au.edu.pk](mailto:syed.usman@mail.au.edu.pk)
- Dr. Abdul Rehman     **Assistant Professor / Postdoctoral Research Associate**  
Faculty of Media and Communication Studies, University of Central Punjab, Lahore, [Pakistan](#).  
School of Computer Science and Engineering, Kyungpook National University, Daegu, [South Korea](#).  
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## Signature

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Signature  I declare that all information is provided in this CV is correct.