Jamsher Bhanbhro

PhD Researcher in AI/ML | Federated Learning & Sustainable AI

■■ Fields Of Specialization

❖ Data Science	❖ Computer Programming
❖ Software Developer	❖ Machine Learning
❖ Deep Learning	❖ Artificial Intelligence

■■ Personal Information

Full Name	Jamsher Bhanbhro
Age	27 years
Languages	Sindhi, Urdu, and English

■■ Contact Information

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Portfolio	jamsherbhanbhro.github.io

■■ Positions Held

PhD Student, Department of Information, Modeling, Electronics and Systems (DIMES) *June 2023 – Present*
University of Calabria, Italy

Thesis Title: *Efficient, Secure, and Sustainable Federated Learning*

- PhD conducted under the FAIR (Future Artificial Intelligence Research) project.
- Research focuses on improving the efficiency, security, and sustainability of federated learning systems

Visiting Researcher, Department of Computer Science   *September 2024 – September 2025*
University of Miami, USA

- Conducted research on privacy-preserving federated learning methods (In Prof. Mingzhe Chen's lab).
- Focused on techniques for improving data privacy and security in distributed learning systems.

Teaching Assistant, Department of Computer Systems Engineering   *March 2021 – October 2022*
Mehran University of Engineering and Technology, Jamshoro

- Served as a Teaching Assistant in the Department of Computer Systems Engineering.
- Assisted in teaching C++ Programming Practical, Object-Oriented Programming (Java), Data Science (Python), Software Engineering, and Python programming.

Freelance Software & Machine Learning Developer   *July 2019 – Present*
Fiverr & Upwork (Level Two Seller, Top-Rated)

- Working as an intermediate machine learning developer, focusing on data analysis and basic machine learning algorithms.
- Provided tutoring in programming languages.

- Designed and developed RESTful services, including UI handlers, core services, and data access layers.
- Developed desktop applications using java swing and fx with Sql databases.

■■ Education

PhD at DIMES University of Calabria *June 2023 to May 2026*
Master of Engineering in Computer & Information Engineering. *Feb 2021 to Feb 2023*
- Completed ME at Institute of Information & Communication Technologies Mehran University of Engineering and Technology Jamshoro, Pakistan.
- Completed outstanding research project titled as: "**Emotion Recognition Using Deep Learning Algorithms and Speech Signals**".
- Got appreciation from the review committee in both initial and final research seminars.
- Published research in IEEE conference proceeding.
- Grade: 3.76/4.0.

Bachelor of Engineering in Computer Systems Engineering. *2016 to 2020*
- Completed BE at Department of Computer Systems Engineering Mehran University of Engineering and Technology Jamshoro, Pakistan.
- Completed outstanding projects including first research publication.
- Was awarded fully funded scholarship by **Higher Education Commission of Pakistan.**
- Grade: 3.78 / 4.0.

■■ Publications (All are as First Author)

1. J. Bhanbhro, "Carbon-Aware Federated Learning with Energy-Sensitive Scheduling for Sustainable AI," 2025 3rd International Conference on Federated Learning Technologies and Applications (FLTA), Dubrovnik, Croatia, 2025

2. Bhanbhro, J. and Nisticò, S.MaGA-Clif: Defending FL from Combined Poisoning Attacks with Marginal Gain Estimation. ADBIS 2025

3. Bhanbhro, J. (2024). Towards More Efficient and Improved Federated Learning. In: Tekli, J., *et al.* New Trends in Database and Information Systems. ADBIS 2024.

4. Bhanbhro, J., Nisticò, S., & Palopoli, L. (2024). Issues in federated learning: Some experiments and preliminary results. *Scientific Reports*, *14*(1), 1-15. https://doi.org/10.1038/s41598-024-81732-0.

5. Bhanbhro, J., Memon, A. A., Lal, B., Talpur, S., & Memon, M. (2025). Speech Emotion Recognition: Comparative Analysis of CNN-LSTM and Attention-Enhanced CNN-LSTM Models. Signals, 6(2), 22. https://doi.org/10.3390/signals6020022.

6. Bhanbhro Jamsher[1], Yousuf Faiez, Narejo Sanam & Furqan Mursal. (2020). PIA Accidents Analysis Using Naïve Bayes Classifier. 2nd [1]nternational Conference on Computational Sciences and Technologies, 17-19 Dec2020 (INCCST'2'), MUET Jamshoro. ISBN-978-969-23372-1-2.

7. Bhanbhro Jamsher[1], Talpur Shahnawaz, & Memon Asif Aziz. (2020). SPEECH EMOTION RECOGNITION USING DEEP LEARNING HYBRID MODELS. International Conference on Emerging Technologies in Electronics, Computing and Communication, 7-19 Dec 2022.

■■ Awards and Honors

- PhD Scholarship – *FAIR-EU Project (2023-2026)*
- Erasmus Traineeship Award (during PhD) (2025/26)
- OxML Scholarship – *University of Oxford Machine Learning Summer School (2025)*
- Selected for Merck Innovation Cup (AI Inference Team, 2025)
- Scholarship for *IoT & AI for Black Swan Events Bootcamp*, University of Cambridge (sponsored by DXC Technology, Italy, 2025).
- Most Viewed paper award (Signals)

■■■ Conferences And Certificates

- Presented Paper in FLTA 2025
- Presented Paper in ADBIS 2025
- Presented Paper in ADBIS 2024
- Presented Paper in ICETECC 2022
- Microsoft Office Specialist
- Certificate of Teaching Sustainable Development Goals
- Certificate of Computational Thinking and Its Importance in Education (Microsoft)
- Certificate of Getting Started with OneNote (Microsoft)
- Certificate of MATLAB Training
- Certificate of IEEE Membership

■■■ Projects (Academic and Freelancing)

- Hospital Management System Using java swing and MySQL
- Optimal Character Recognition Using MATLAB
- Attendance management system using facial recognition using python
- Weather Prediction Using Python
- Book management Website using Servlet and JSP.
- Removing abnormalities from the dataset using histograms analysis

■■■ Personal References

- **Professor Luigi Palopoli**
  Professor, DIMES, UNICAL Italy
  palopoli@dimes.unical.it
- **Dr Shahnawaz Talpur**
  Associate Professor, Co-Director IICT, Chairman CSE MUET
  shahnawaz.talpur@faculty.muet.edu.pk