TALHA

I am a workhorse when meeting my commitments and deadlines and want to work in a research and development-oriented professional environment, where opportunities are provided for career growth.

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Research Profile Links:

ResearchGate: https://www.researchgate.net/profile/Talha-Meraj

ORCID: https://orcid.org/0000-0002-5743-3697

Google Scholar: https://scholar.google.com/citations?user=UEN0TqUAAAAJ&hl=en

Sci Profile: https://sciprofiles.com/profile/1611869

Biography:

Talha received his bachelor's degree in Computer Science from University of Gujrat, Punjab, Pakistan. He has completed his master's in computer science at COMSATS University Islamabad, Wah Campus and currently pursuing Ph.D. at Atlantic Technological University, Sligo, Ireland. He contributed to more than 20 published articles of Machine Learning, Computer Vision, NLP, Medical Imaging topics in Top notch conferences, and well-regarded Journals. His research interests are in machine learning based data analysis research articles such as computational linguistics, data analysis, sentimental analysis, deep learning, and machine learning. He is the reviewer of IEEE Access, Scientific Reports and many other well-reputed Journals. During his academic and research career, he worked on different research and development projects on freelancing websites Fiverr and Upwork etc.

Qualification/Education:

1. **Ph.D (TU RISE Funded MATX12 Project**: Generative AI for Non-invasive MRI Enhancement in Brain Tumour Diagnosis**)** (Sep 2024-**Present**)
2. **MS (CS)** [Master of Science (Computer Science)] (2020-22) **CGPA-3.94/4.00** from COMSATS University Islamabad, Wah Campus.
3. **BS (CS)** [BS in Computer Science] (2015-2019) **CGPA-2.95/4.00** from University of Gujrat, Gujrat.
4. **Intermediate** [Higher Secondary School Certificate] (Pre-Engineering, 2013-15) **Marks: 757/1100** from Punjab College Gujranwala, Gujranwala Board.

5. **Matric** [Secondary School Certificate] (Science, 2011-13) **Marks: 910/1050** from Sirat-ul-Jannah Divisional High School Hafizabad Road, Gujranwala, Gujranwala Board

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Experience:

- Research Associate at Intelligent Machines Lab, Department of Computer Science, Information Technology University, Lahore (Oct 2023-June 2024)
- Freelancer at Fiverr and Upwork (2019-Present)
- Former President at ACM Student Chapter- UOG (2019)
- Former Senior Vice President at Hayatian Computing Society (2018-19)
- Former Event Manager at Hayatian Computing Society (2017-18)
- Former Event Manager at Hayatian Quiz Society (2015-16)

Technical Skills:

Domains:

- Machine Learning, Deep Learning, Image Processing, Computer Vision, Natural Language Processing, Computational Linguistics

Tools:

- Python (Jupyter Notebook, Spyder, Google Colab), MATLAB, R Studio, Android Studio

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Achievements:

- Won Laptop in Chief Minister Laptop Scheme
- Won Laptop in Prime Minister Scheme
- First Position in MS (CS)
- Worked with many Research Professors Globally and published 21 Impact Factor Publications Reviewer in many Journals such as IEEE Access, Springer, and Elsevier Publishers

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Projects:

- MS Thesis “Segmentation and Classification of Breast Cancer using Deep Convolutional Neural Networks”
  Supervisor: Dr. Muhammad Sharif, Grade: A+
- BS Final Year Project “Lungs Nodule Detection and Classification using Hybrid Feature Selection”
  Supervisor: Prof. Dr. Ikram Ullah Lali, Grade: A+

Research Work and Publications:

2024

1. **Meraj T.**, Sharif MI, Raza M, Alabrah A, Kadry S, Gandomi AH. Computer vision-based plants phenotyping: A comprehensive survey. iScience. 2023 Dec 12;27(1):108709. doi: 10.1016/j.isci.2023.108709
2. Rehman, A., **Meraj, T.,** Minhas, A. M., Imran, A., Ali, M., & Sultani, W. (2024). A Large-scale Multi Domain Leukemia Dataset for the White Blood Cells Detection with Morphological Attributes for Explainability. *arXiv preprint arXiv:2405.10803*. **MICCAI 2024 [Early Accept, Oral Presentation]**
3. Alawadh, H. M., **Meraj, T.**, Aldosari, L., & Tayyab Rauf, H. (2024). An Efficient Text-Mining Framework of Automatic Essay Grading Using Discourse Macrostructural and Statistical Lexical Features. Sage Open, 14(4). https://doi.org/10.1177/21582440241300548

2023

1. Mahum, R.; Irtaza, A.; Rehman, S.U.; **Meraj, T.**; Rauf, H.T. A Player-Specific Framework for Cricket Highlights Generation Using Deep Convolutional Neural Networks. *Electronics* **2023**, *12*, 65. https://doi.org/10.3390/electronics12010065
2. Rashid, T.; Zia, M.S.; Najam-ur-Rehman; **Meraj, T.**; Rauf, H.T.; Kadry, S. A Minority Class Balanced Approach Using the DCNN-LSTM Method to Detect Human Wrist Fracture. *Life* **2023**, *13*, 133. https://doi.org/10.3390/life13010133
3. Alawadh, H.M.; Alabrah, A.; **Meraj, T.**; Rauf, H.T. Semantic Features-Based Discourse Analysis Using Deceptive and Real Text Reviews. *Information* **2023**, *14*, 34. https://doi.org/10.3390/info14010034
4. Alawadh, H.M.; Alabrah, A.; **Meraj, T.;** Rauf, H.T. English Language Learning via YouTube: An NLP-Based Analysis of Users' Comments. *Computers* **2023**, *12*, 24. https://doi.org/10.3390/computers12020024
5. Alawadh, H.M.; Alabrah, A.; **Meraj, T.**; Rauf, H.T. Attention-Enriched Mini-BERT Fake News Analyzer Using the Arabic Language. *Future Internet* **2023**, *15*, 44. https://doi.org/10.3390/fi15020044
6. Ayman, U.; Zia, M.S.; Okon, O.D.; Rehman, N.-u.; **Meraj, T.**; Ragab, A.E.; Rauf, H.T. Epileptic Patient Activity Recognition System Using Extreme Learning Machine Method. *Biomedicines* **2023**, *11*, 816. https://doi.org/10.3390/biomedicines11030816

2022

1. K. Manzoor, F. Majeed, A. Siddique, **T. Meraj**, H. Tayyab Rauf *et al.*, "A lightweight approach for skin lesion detection through optimal features fusion," *Computers, Materials & Continua*, vol. 70, no.1, pp. 1617–1630, 2022.
2. Alabrah, A.; Alawadh, H.M.; Okon, O.D.; **Meraj, T.**; Rauf, H.T. Gulf Countries' Citizens' Acceptance of COVID-19 Vaccines—A Machine Learning Approach. *Mathematics* **2022**, *10*, 467. https://doi.org/10.3390/math10030467
3. Alharbi, A.; Alshammari, M.; Okon, O.D.; Alabrah, A.; Rauf, H.T.; Alyami, H.; **Meraj, T.** A Novel text2IMG Mechanism of Credit Card Fraud Detection: A Deep Learning Approach. *Electronics* **2022**, *11*, 756. https://doi.org/10.3390/electronics11050756
4. Lu S, Huang K, **Meraj T**, Rauf HT. 2022. A novel CAPTCHA solver framework using deep skipping Convolutional Neural Networks. *PeerJ Computer Science* 8:e879 https://doi.org/10.7717/peerj-cs.879

5. Albahli, S., **Meraj, T.**, Chakraborty, C. *et al.* AI-driven deep and handcrafted features selection approach for Covid-19 and chest related diseases identification. *Multimed Tools Appl* **81**, 37569–37589 (2022). https://doi.org/10.1007/s11042-022-13499-3
6. Alawadh, H. M., Alabrah, A., **Meraj, T.**, Rauf, H. T: Discourse analysis based credibility checks to online reviews using deep learning based discourse markers. Computer Speech & Language 2023; 78. ISSN 0885-2308
7. Kamran, M.; Rehman, S.U.; **Meraj, T.**; Alnowibet, K.A.; Rauf, H.T. Camouflage Object Segmentation Using an Optimized Deep-Learning Approach. *Mathematics* **2022**, *10*, 4219. https://doi.org/10.3390/math10224219

2021

1. **Meraj, T.**, Rauf, H.T., Zahoor, S. *et al.* Lung nodules detection using semantic segmentation and classification with optimal features. *Neural Comput & Applic* **33**, 10737–10750 (2021). https://doi.org/10.1007/s00521-020-04870-2
2. Lal, S.; Rehman, S.U.; Shah, J.H.; **Meraj, T.**; Rauf, H.T.; Damaševičius, R.; Mohammed, M.A.; Abdulkareem, K.H. Adversarial Attack and Defence through Adversarial Training and Feature Fusion for Diabetic Retinopathy Recognition. *Sensors* **2021**, *21*, 3922. https://doi.org/10.3390/s21113922
3. Mahum, R.; Rehman, S.U.; **Meraj, T.**; Rauf, H.T.; Irtaza , A.; El-Sherbeeny, A.M.; El-Meligy , M.A. A Novel Hybrid Approach Based on Deep CNN Features to Detect Knee Osteoarthritis. *Sensors* **2021**, *21*, 6189. https://doi.org/10.3390/s21186189
4. Rehman, N.-u.; Zia, M.S.; **Meraj, T.**; Rauf, H.T.; Damaševičius, R.; El-Sherbeeny, A.M.; El-Meligy, M.A. A Self-Activated CNN Approach for Multi-Class Chest-Related COVID-19 Detection. *Appl. Sci.* **2021**, *11*, 9023. https://doi.org/10.3390/app11199023
5. **Meraj T**, Alosaimi W, Alouffi B, Rauf HT, Kumar SA, Damaševičius R, Alyami H. 2021. A quantization assisted U-Net study with ICA and deep features fusion for breast cancer identification using ultrasonic data. *PeerJ Computer Science* 7:e805 https://doi.org/10.7717/peerj-cs.805
6. Mahum, R.; Rehman, S.U.; Okon, O.D.; Alabrah, A.; **Meraj, T.**; Rauf, H.T. A Novel Hybrid Approach Based on Deep CNN to Detect Glaucoma Using Fundus Imaging. *Electronics* **2022**, *11*, 26. https://doi.org/10.3390/electronics11010026
7. Mostafa, A.M.; Kumar, S.A.; **Meraj, T.**; Rauf, H.T.; Alnuaim, A.A.; Alkhayyal, M.A. Guava Disease Detection Using Deep Convolutional Neural Networks: A Case Study of Guava Plants. *Appl. Sci.* **2022**, *12*, 239. https://doi.org/10.3390/app12010239

Interesting Areas:

- Computer Vision and Pattern Recognition
- Natural Language Processing
- Machine Learning
- Deep Learning
- Computational Linguistics