

Dr. Ali Ghulam

Assistant Professor

Information Technology Centre

Sindh Agriculture University, Tandojam

Published Impact Factor. **87.091**

H-Index (Google Scholar) **16**

i10-Index (Google Scholar) **31**

Research Gate Score. H-Index. **13**

Citations **789**



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BIOGRAPHY:

I am Dr. Ghulam Ali received the Ph.D. degree Doctor of Engineering in Computer Software and theory, from Shaanxi Normal University, Xian China in 2020. I am currently working as Assistant Professor at Information Technology Centre, Sindh Agriculture University, Tandojam. My research interests include human disease pathway network modeling and biological pathway databases discovery based on AI. I am having lot of work published on Prediction of Pathway Related Protein, Drug and Disease Association Based on Complex Network and AI, Deep Learning and Machine Learning. I have been published more then 22 SCI articles within high Impact factor Journal, 03 articles -ESCI research journals.

PRESENT RESEARCH WORK:

Presently, I am working on human proteins sequence using with machine learning, as the volume and accessibility of Bioinformatics data increases, machine learning is playing an important role in diagnosis. Machine learning helps to structure, normalize, and analyze biological data, so Bioinformatics and life science organizations can use it to make better and quicker decisions — be it precision diagnosis using genomic sequencing, early-state cancer detection, or advanced cardiac visualization with custom machine learning models. Purpose-built Bio data AI services automatically transform bio medical data in machine learning and deep learning.

CURRENT RESEARCH PROJECTS UNDER STUDY:

Following are the details of my current research projects under study.

1. Disease Prediction of Mango Crop of Sindh Based on Machine Learning algorithms and IoT.
2. Multiple Crops Disease Prediction Based on Machine Learning Approaches (MCDP-MLA)
3. Plants Disease Detection Based on Using Deep learning (PDD-UDL).

EDUCATION:

Ph.D. (Doctor of Engineering)

September 2017- December 2020: Ph.D. (Doctor of Engineering) from School of Computer Science and Technology, Shaanxi Normal University, Xi'an China

Supervisor: Prof. Xiujuan Lei, School of Computer Science and Technology, Computing Biological Laboratory, Shaanxi Normal University, Xi'an China

Thesis title: “Prediction of Pathway Related Protein, Drug and Disease Association Based on Complex Network and Deep Learning” (Major. Computer Software and Theory) and Specialization. Bioinformatics and A.I

M. Phill (Computer Science)

(Specialization of Search Engine Optimization)- Institute of Computer Science, University of Sindh Jamshoro Sindh.

Bachelor of Computer Science (BCS-HONS)

May 2005 from Institute of Computer Science, University of Sindh Jamshoro Sindh.

Certificate in Information Technology (CIT) from Hirabad,

Computer Academy, Hyderabad 02-01-2002, To 30-04-2002.

Diploma Information Technology (DIT) AI Soft,

IT Training and Certification Placement Centre, Hyderabad 08-08-2002, To 09-09-2003.

F. Sc. (Pre-Medical): Marks Obtained

Passed with Physics, Chemistry, Biology and English as major Subjects in 1999 from Govt Sarwari Islamia Degree College Halla Sindh, Pakistan.

Matriculation: Marks Obtained

Passed with Physics, Chemistry, Maths and English as major subjects in 1997 from Govt. High School Sabu Rahu, Distt. Nawabshah, Sindh, Pakistan.

Research Publications: (Published Impact Factor: 87.091)

[1] Rahu, S., Ghulam, A., Brohi, T. A., Ahmed, A., Rehman, M., & Noor, H. (2025). PREDICTION OF VESICULAR TRANSPORT PROTEINS FROM SEQUENCE DATA WITH GRU-BASED DEEP LEARNING MODELS. *Spectrum of Engineering Sciences*, 3(9), 861-873.

[2] Abbas, M., Ali, F., Rahu, S., Shafi, H., Brohi, T. A., & Ghulam, A. (2025). A DEEP LEARNING FRAMEWORK FOR SPACE WEATHER PREDICTION: LEVERAGING TWO-DIMENSIONAL CONVOLUTIONAL NEURAL NETWORK FOR SUNSPOT FORECASTING. *Spectrum of Engineering Sciences*, 3(8), 159-166.

[3] Channar, N. A., Koondhar, M. Y., Shaikh, S., Issani, F. N., Dahri, N. N., Maher, Z. A., & Ghulam, A. (2025). A REVIEW ON EDGE AI FOR LOW-LATENCY HEALTH MONITORING IN WEARABLE IOT DEVICES: CHALLENGES AND FUTURE DIRECTIONS. *Spectrum of Engineering Sciences*, 3(7), 1424-1435.

[4] Sikander1a, R., Bawany1b, N. Z., Ghulam, A., Rehman, M., & Farruhbek, R. (2025). IDENTIFICATION OF HEMAGGLUTININ USING SEQUENCE INFORMATION MACHINE LEARNING LIGHTGBM. *Journal of Medical & Health Sciences Review*, 2(3).

[5] Akbar, S. A. A. S., Korejo, I. A., Laghari, G., Brohi, K., & Ghulam, A. (2025). A Review on Cardiovascular Diseases Risk Prediction Approches Based on Machine Learning and Evolutionary Algorithms. *VAWKUM Transactions on Computer Sciences*, 13(1), 140-160.

[6] Israr, M., Haider, S. A., Ahmed, M., Idrees, A., Khan, H. S. A., & Ghulam, A. (2025). Design and Performance Evaluation of Hybrid Solar-Wind Systems for Off-Grid Electrification: Analyzing Energy Reliability, Storage Optimization, and Cost-Benefit Trade-offs in Remote and Rural. *Global Research Journal of Natural Science and Technology*, 3(2).

- [7] ALI, G., TARIQUE, A., TAHA, H., NIDA, J., TAIYABA, Q., MUJEEB, U. R., ... & SULTAN, A. (2025). AN EXPLAINABLE PHOSPHORYLATION PEPTIDE ASSOCIATED WITH SARS-COV-2 INFECTION EMPLOYING A 2D CONVOLUTIONAL NEURAL NETWORK (2DCNN). *PHYSICAL EDUCATION, HEALTH AND SOCIAL SCIENCES Yuredume.lu: Wisdom Education & Research Hub*, 3(1), 23-46.
- [8] HUSSAIN, Z., SIDRA, B., KHAN, A., SHAHEEN, R., ASIF, M., & GHULAM, A. (2025). COMPARATIVE EVALUATION OF ELISA, PCR, AND NS1 ANTIGEN DETECTION FOR DENGUE VIRUS DIAGNOSIS. *INSIGHTS-JOURNAL OF HEALTH AND REHABILITATION Yuredume.lu: Health and Research Insights*, 3(1), 574-580.
- [9] Khan, I., Arif, M., Ghulam, A., Albaradei, S., Thafar, M. A., & Worachartcheewan, A. (2025). Improved in Silico Identification of Protein-Protein Interactions Using Deep Learning Approach. *IET Systems Biology*, 19(1), e70008.
- [10] Khan, I., Arif, M., **Ghulam, A.**, Albaradei, S., Thafar, M. A., & Worachartcheewan, A. (2025). Improved in Silico Identification of Protein-Protein Interactions Using Deep Learning Approach. *IET Systems Biology*, 19(1), e70008. (SCI, IF : 1.9).
- [11] **Ghulam, A.**, Arif, M., Unar, A., A. Thafar, M., Albaradei, S., & Worachartcheewan, A. (2025). StackAHTPs: An explainable antihypertensive peptides identifier based on heterogeneous features and stacked learning approach. *IET Systems Biology*, 19(1), e70002. (SCI, IF : 1.9).
- [12] **Ghulam, A.**, Ali, T., Hussain, T., Jabeen, N., Qureshi, T., ur Rehman, M., ... & Ahmed, S. An explainable phosphorylation peptide associated with SARS-CoV-2 infection employing a 2D Convolutional Neural Network (2DCNN), *SOCIAL SCIENCE REVIEW ARCHIVES* ISSN Print: 3006-4694.
- [13] Rahu, S., **Ghulam, A.**, Tahseen, S., Baloch, A. K., & Baloch, A. R. (2024). 2DCNN_CLA: Accurate prediction of Clathrin proteins using hyperparameter optimization in deep learning and DDE profiles. *VAWKUM Transactions on Computer Sciences*, 12(1), 163-179. (HEC Index, Category - Y).
- [14] Sikander, R., Rehman, M., Brohi, T. A., Ahmed, A., **Ghulam, A.**, & Ahmed, S. (2024). An Explainable Identifier of iGHBP's Peptides Based on Deep PSSM Features and Learning Approaches. *Insights-Journal of Health and Rehabilitation*, 2(2 (Health & Allied)), 571-579. (HEC Index, Category - Y).
- [15] Kausar, F. N., Subhani, M. A., Mansoor, S., Abid, N., Osama, M., **Ghulam, A.**, & Khan, S. (2024). Effect Of Students'intellectual Ability On Students'motivation Toward Learning At University Level. *Insights-Journal of Life and Social Sciences*, 2(1), 45-53. (HEC Index, Category - Y).
- [16] Siddiqui, M. A., Niazi, M. M., Qureshi, M. D. A., Arshad, A. H., Ejaz, A., & **Ghulam, A.** (2024). Implementation Of Natural Language Processing (Nlp) In Ehr Systems To Improve Clinical Documentation. *Insights-Journal of Health and Rehabilitation*, 2(2 (Health & Rehab)), 394-399. (HEC Index, Category - Y).
- [17] Afzal, M. T., Sana, A., Khan, S. A., **Ghulam, A.**, Kashif, M. U. R., & Jan, R. (2024). Telemedicine And Its Effect On Chronic Disease Management In Remote Communities. *Insights-Journal of Health and Rehabilitation*, 2(2 (Health & Rehab)), 355-361. (HEC Index, Category - Y).
- [18] Rahu, M. U. R., Liu, Q., & **Ghulam, A.**, Accurate Prediction of Monkeypox Disease Cases by Analyzing Symptoms with Ensemble Learning Boosting Methods and Using ML Techniques. *Available at SSRN 4978187*. (SCI, preprint).

- [19] Maher, Z. A., **Ghulam, A.**, Koondhar, M. Y., Mahar, I. A., & Hyder, M. (2024). Security Based SCURM Process (SUBSCRUM) For Secure Agile Development. *VFAST Transactions on Software Engineering*, 12(3), 138-146. (HEC Index, Category - Y).
- [20] Muhammad Arif, Saleh Musleh, **Ali Ghulam**, Huma Fida, Yasser Alqahtani, Tanvir Alam, "StackDPPred: Multiclass prediction of defensin peptides using stacked ensemble learning with optimized features", *Methods*, Volume 230, 2024, Pages 129-139, ISSN 1046-2023, <https://doi.org/10.1016/j.ymeth.2024.08.001>. (SCI, IF : 4.02, HJRS Index, Category - W).
- [21] Arif, Muhammad, Ge Fang, **Ali Ghulam**, Saleh Musleh, and Tanvir Alam. "DPI_CDF: druggable protein identifier using cascade deep forest." *BMC bioinformatics* 25, no. 1 (2024): 1-18. (SCI, IF : 3.09, HEC Index, Category - W).
- [22] Talpur, Fauzia, Imtiaz Ali Korejo, Aftab Ahmed Chandio, **Ali Ghulam**, and Mir Sajjad Hussain Talpur. "ML-Based Detection of DDoS Attacks Using Evolutionary Algorithms Optimization." *Sensors* 24, no. 5 (2024): 1672. (SCI, IF : 3.09, HEC Index, Category - W).
- [23] **Ghulam, Ali**, and Mujeebu Rehman. "Assessment of Performance of Machine Learning Classification Techniques for Monkey Pox Disease Detection: Monkey Pox Disease Detection." *Journal of Innovative Intelligent Computing and Emerging Technologies (JIICET)* 1, no. 01 (2024): 1-7.
- [24] Memon, Mukhtiar, Suhni Abbasi, **Ali Ghulam**, and Habibullah Magsi. "AiDHealth: An AI-enabled Digital Health Framework for Connected Health and Personal Health Monitoring." (2023).
- [25] Sikander, Rahu, **Ali Ghulam**, Jawad Hassan, Laiba Rehman, Nida Jabeen, and Natasha Iqbal. "Identification of cancerlectin proteins using hyperparameter optimization in deep learning and DDE profiles." *Mehran University Research Journal of Engineering & Technology* 42, no. 4 (2023): 28-40. (WoS: Yes, HEC Index, Category - X).
- [26] Magsi, Arif Hussain, Leanna Vidya Yovita, **Ali Ghulam**, Ghulam Muhammad, and Zulfiqar Ali. "A Content Poisoning Attack Detection and Prevention System in Vehicular Named Data Networking." *Sustainability* 15, no. 14 (2023): 10931. (SCI, IF : 3.889, HEC Index, Category - W).
- [27] A.H. Magsi, A. Ghulam, S. Memon, K. Javeed, M. Alhussein et al., "A machine learning-based attacks detection and prevention system in vehicular named data networking," *Computers, Materials and Continua* (Accepted: 13-06-2023) (SCI 2022, IF : 3.9, HEC Index, Category - W)
- [28] Hassan, Jawad, Muhammad Kamran Abid, Ali Ghulam, Muhammad Salman Fakhar, and Muhammad Asif. "A Survey on Blockchain-based Intrusion Detection Systems for IoT." *VIAWKUM Transactions on Computer Sciences*, (2023), (HEC Index, Category - Y).
- [29] Ghulam, Ali, Zar Nawab Khan Swati, Farman Ali, Saima Tunio, Nida Jabeen, and Natasha Iqbal. "DeepImmuno-PSSM: Identification of Immunoglobulin based on Deep learning and PSSM-Profiles." (2023). " *VFAST Transactions on Software Engineering*., Vol 11, No 1 (2023) (HEC Index, Category - Y).
- [30] Qureshi, R., Asad, M., Tunio, S., Qureshi, S., Ahmed, M., & **Ghulam, A** "A Survey on Security Issues and Attacks of Fog Computing." *VFAST Transactions on Software Engineering*., Vol 11, No 1 (2023) (HEC Index, Category - Y).
- [31] Zar Nawab Khan Swati, **Ali Ghulam**, Muhammad Sohail, Jawad Usman Arshed, Rahu Sikander, Muhammad Shahid Malik, Nauman khan. "XGboost-Ampy: Identification of AMPylation Protein Function

Prediction Using Machine Learning" *VAWKUM Transactions on Computer Sciences*, Vol. 10, No. 2., pp.83-95, 2022. (HEC Index, Category - Y).

[32] Sikander, Rahu, **Ali Ghulam**, Zar Nawab Khan Swat, and Jawad Usman Arshed. "AOPs-XGBoost: Machine learning Model for the prediction of Antioxidant Proteins properties of peptides." *VAWKUM Transactions on Computer Sciences*, Vol. 10, No. 2., pp: 73-82, 2022. (HEC Index, Category - Y).

[33] Jawad Hassan, Kaleem Razzaq Malik, Ghulam Irtaza, **Ali Ghulam**, Ashfaq Ahmad "Disease Identification using Deep Learning in Agriculture: A Case Study of Cotton Plant", December 2022, *VFAST Transactions on Software Engineering* 10(4):104-115. (HEC Index, Category - Y).

[34] Rahu, S., **Ghulam, A.**, Farman, A., Talpur, D. B., Talpur, M. S. H., Saba, E., ... & Tunio, S. (2022). Ubi-Xgb: Identification of Ubiquitin Proteins Using Machine Learning Model. *Journal of Mountain Area Research*, 8, 14-26 (HEC Index, Category - Y).

[35] **Ghulam, A.**, et al. "Identifying Molecular Functions Of Dynein Motor Proteins Using Extreme Gradient Boosting Algorithm With Machine Learning." *Journal of Mountain Area Research*, 8 (2022): 1-13. (HEC Index, Category - Y)

[36] Dani Bux Talpur*, **Ali. Ghulam**, et al. Accurate prediction of Snare Protein Sequence using Machine Learning, *Bioscience Research*, 2022 19(3): 1414-1422 (ESCI, HEC Index, Category - Y)

[37] Sikander, R., Arif, M., **Ali. Ghulam**, Worachartcheewan, A., Thafar, M. A., & Habib, S. (2022). Identification of the ubiquitin–proteasome pathway domain by hyperparameter optimization based on a 2D convolutional neural network. *Frontiers in Genetics*, 1908. (SCI 2022, IF : 4.772, HEC Index, Category - W).

[38] Chanihoon, G. Q., Afridi, H. I., Unar, A., Talpur, F. N., Kolach, H. B., Nassani, R., ... & Chandio, A. U. R. (2022). Selenium and Mercury Concentrations in Biological Samples from patients with COVID-19. *Journal of Trace Elements in Medicine and Biology*, 127038. (SCI 2022, IF : 3.995, HEC Index, Category - W).

[39] Rahu Sikander*, **Ali Ghulam**, Mujeeb -ur- Rehman. " Identifying Disease Genes based on Machine Learning approaches for Classification (2022). *VAWKUM Transactions on Computer Sciences*, Vol. 10(1)- (January-June, 2022., Pp: 42-51. (HEC Index, Category - Y).

[40] **Ghulam, Ali**, Rahu Sikander, and Farman Ali. "AI and Machine Learning-based practices in various domains: A Survey." (2022). *VAWKUM Transactions on Computer Sciences*, Vol. 10(1)- (January-June, 2022., Pp: 21-41. (HEC Index, Category - Y).

[41] **Ali. Ghulam**, et al. "ACP-2DCNN: Deep learning-based model for improving prediction of anticancer peptides using two-dimensional convolutional neural network." *Chemometrics and Intelligent Laboratory Systems*, Volume 226, 15 July 2022, 104589. (SCI 2022, IF : 4.175, HEC Index, Category - W).

[42] Sikander, R., **Ali. Ghulam**, & Ali, F. XGB-DrugPred: computational prediction of druggable proteins using eXtreme gradient boosting and optimized features set. *Sci Rep* 12, 5505 (2022). <https://doi.org/10.1038/s41598-022-09484-3> (SCI, IF : 4.996, HEC Index, Category - W).

[43] **Ali. Ghulam**, et al., 2022., "Accurate prediction of immunoglobulin proteins using machine learning model," *Informatics in Medicine Unlocked*, Volume 29, 2022, 100885, <https://doi.org/10.1016/j.imu.2022.100885>. (Scopus, HEC Index, Category - Y).

- [44] **Ali. Ghulam**, Xiujuan Lei, Yuchen Zhang, Zhenqiang Wu, "Human drug-pathway association prediction based on network consistency projection", **Computational Biology and Chemistry**, Volume 97, 2022, 107624. (SCI, 中科院大类三区, IF : 3.737, WoS-SCI, HEC Index, Category - Y)
- [45] Ali, F., **Ali. Ghulam.**, Maher, Z. A., Khan, M. A., Khan, S. A., & Hongya, W. (2021). Deep-PCL: A deep learning model for prediction of cancerlectins and non cancerlectins using optimized integrated features. **Chemometrics and Intelligent Laboratory Systems**, 104484. (SCI, 2021 IF : 4.175, HEC Index, Category - W).
- [46] Sikander R, Wang Y, **Ali. Ghulam** and Wu X (2021) Identification of Enzymes-specific Protein Domain Based on DDE, and Convolutional Neural Network. **Front. Genet.** 12:759384. doi: 10.3389/fgene.2021.759384 (SCI 2022, IF : 4.772, HEC Index, Category - W).
- [47] Ali, F., Akbar, S., **Ali. Ghulam**, Maher, Z. A., Unar, A., & Talpur, D. B. (2021). AFP-CMBPred: Computational identification of antifreeze proteins by extending consensus sequences into multi-blocks evolutionary information. **Computers in Biology and Medicine**, 105006. (SCI, 2020 IF : 6.698, HEC Index, Category - W).
- [48] Sikander, Rahu, **Ali. Ghulam**, and Zar Nawab Khan Swati, "2DCNNT3: Sequence Prediction based on 2DCNN for secret effector based bacterial Type III, " **Bioscience Research**, 2021 volume 18(4):2574-2584 (ESCI, HEC Index, Category - Y)
- [49] Shahruxh Khan, **Ali. Ghulam**, et al., 2021., "Effect of different growing media on emergence and growing of *Cassia glauca* L.", **Bioscience Research**, 2021 volume 18(3): 2483-2489 (ESCI, HEC Index, Category - Y)
- [50] **Ali. Ghulam**, Xiujuan Lei, et al. 2021, "Identification of Novel Protein Sequencing SARS CoV-2 Coronavirus Using Machine Learning" **Bioscience Research**, 2021 18(SI-1): 47-58. (ESCI, HEC Index, Category - Y)
- [51] **Ali. Ghulam**, Xiujuan Lei, Y. Zhang, S. Cheng and M. Guo, "Identification of Pathway-Specific Protein Domain by Incorporating Hyperparameter Optimization Based on 2D Convolutional Neural Network," in **IEEE Access**, vol. 8, pp. 180140-180155, 2020, doi: 10.1109/ACCESS.2020.3027887. (SCI, 中科院大类二区, 2020IF : 3.476, HEC Index, Category - W)
- [52] **Ali. Ghulam**, Xiujuan Lei, Yuchen Zhang, Zhenqiang Wu. Pathway-specific Protein Domains (PSPD) Discrimination by Using a Hybrid Feature Space Based on Deep Neural Network (DNN). **Algorithms for Molecular Biology** (SCI, 中科院大类四区, 2019IF : 1.706, Peer Review Process)
- [53] **Ali Ghulam**, Xiujuan Lei, Min Guo, Chen Bian. Disease-pathway Association Prediction Based on Random Walks with Restart and PageRank. **IEEE Access**, Apr.13, 2020, 8(1): 72021-72038 (SCI, 中科院大类二区, 2020IF : 3.476, HEC Index, Category - W)
- [54] **Ali Ghulam**, Xiujuan Lei*, Min Guo and Chen Bian, "Comprehensive Analysis of Features and Annotations of Pathway Databases", **Current Bioinformatics** (2020) 15: 803. (SCI, 中科院大类二区, 2019, IF: 4.850, Category - X)
- [55] **Ali Ghulam**, Xiujuan Lei, Min Guo, Chen Bian. A Review of Pathway Databases and Related Methods Analysis. **Current Bioinformatics**, 2020, 15: 380-396 (SCI, 中科院大类四区, 2019, IF: 4.850, Category - X)

- [56] **Ghulam, Ali**, et al. "On-Page Search Engine Optimization (SEO) Techniques Model: A Use Case Scenario of a Business Entity Website." *International Journal for Research in Applied Science & Engineering Technology (IJRASET)* (2017): 5.
- [57] Rahu, **Ali Ghulam**, et al. "Extending Off-Page Search Engine Optimization (Seo) Techniques Based on Google Seo Techniques Model." *Science International* 28.5 (2016).
- [58] Maher, Zulfikar Ahmed, Asadullah Shah, Humaiz Shaikh, **Ghulam Ali Rahu**, Pinial Khan Butt, Shahmurad Chandio, and Saima Shaikh. "A methodology for modeling and analysis of secure systems using security patterns and mitigation use cases." In *2018 7th International Conference on Computer and Communication Engineering (ICCCE)*, pp. 268-273. **IEEE, 2018.**
- [59] MAHER, Z., MALIK, A., **Ghulam, G.**, SHAIKH, S., BUTT, P., MAHAR, I., & SHAIKH, H. (2018). A Metadata Architecture over cloud for enabling knowledge support for SMEs. *Sindh University Research Journal (Science Series)*, 50(3D), 110-115.
- [60] Sikander Rahu, **Ali Ghulam**, "Proposed Study Six 6 Core Component of IOT (Part-3)" *International Journal for Research in Applied Science and Engineering Technology*, Volume 6, Issue III, Pages, 2806-2811. March 2018/3.
- [61] Sikander Rahu, **Ali Ghulam**, Wu Zhen Qiang, and M. H. Depar. "CMS Model Subjective Quality Evaluation VIA Crowdsourcing." *International Journal for Research in Applied Science and Engineering Technology*, Volume 6 Issue I, Pages, 292-303. January 2018.

Conference Publications

- [62] Mahar, Iftekhhar Ahmed, Wu Libing, **Ali Ghulam**, Zulfikar Ahmed Maher, and Muhammad Yaqoob Koondhar. "Feature Based Comparative Analysis of Traditional Intrusion Detection System and Software-Defined Networking Based Intrusion Detection System." In *2023 IEEE 8th International Conference on Engineering Technologies and Applied Sciences (ICETAS)*, pp. 1-5. IEEE, 2023.
- [63] **Ali Ghulam**, Rahu Sikander Zulfikar Ahmed Maher, Erum Saba, Muhammad Yaqoob Koondhar, Arif Hussain Magsi, "Prediction of Monkeypox Disease based on Performance Evaluation of Machine Learning Classification Methods", January 2024, Conference: 2024 IEEE 1st Karachi Section Humanitarian Technology Conference At: 08-09, JAN, 2024., Sindh Agriculture University, Tandojam, pid.54. p:56.
- [64] **Ali Ghulam**, Rahu Sikander Zulfikar Ahmed Maher, Erum Saba, Muhammad Yaqoob Koondhar, Arif Hussain Magsi, "Accurate Performance Evaluation of Machine Learning Boosting Methods for Identification of Monkey Pox Disease" January 2024, Conference: 2024 IEEE 1st Karachi Section Humanitarian Technology Conference At: 08-09, JAN, 2024., Sindh Agriculture University, Tandojam, pid.55. p:57.
- [65] Mahar, Iftekhhar Ahmed, Wu Libing, Zulfikar Ahmed Maher, and **Ali Ghulam**. "A Comprehensive Survey of Software Defined Networking and its Security Threats." In *2024 IEEE 1st Karachi Section Humanitarian Technology Conference (KHI-HTC)*, pp. 1-5. IEEE, 2024.
- [66] **Ali Ghulam**, Mir Sajjad Hussain Talpur, Zulfikar Ahmed Maher, Muhammad Yaqoob Koondhar, Rahu Sikander, Mujeebu Rehman, "Identifying DNA-Binding proteins using local features DPC-PSSM and AB-PSSM with primary sequences based on deep learning", January 2024, Conference: 2024 IEEE 1st Karachi Section Humanitarian Technology Conference At: 08-09, JAN, 2024., Sindh Agriculture University, Tandojam, pid.55. p:57.

[67] **Ali Ghulam**, Mir Sajjad Hussain Talpur, Zulfikar Ahmed Maher, Muhammad Yaqoob Koondhar, Rahu Sikander, Mujeebu Rehman , “Classification of antihypertensive peptides (AHTP) based on comparison of Ensemble Learning Methods”, January 2024, Conference: 2024 IEEE 1st Karachi Section Humanitarian Technology Conference. Conference At: 08-09, JAN, 2024., Sindh Agriculture University, Tandojam, pid.55. p:57.

[68] **Ali Ghulam**, Sikander Rahu, “A Novel Machine Learning Computational Identification of Growth Hormone Binding Proteins from Sequences using GRU Algorithm”., February 2024, Conference: Season III, Proceeding Emerging Scientist 2024, Conference Proceeding (Asian Council of Science Editors) February 16-17, 2024At: Faisalabad, Pakistan Volume: Season III, Proceeding Emerging Scientist 2024

PEER JOURNAL REVIEWER EXPERIENCE:

1. Frontiers in Genetics (Reviews 2 papers)
2. Informatics in Medicine Unlocked (Reviews 4 papers)
3. RADS Journal of Computer Science and Technology (Reviews 4 paper)
4. Computational Intelligence and Neuroscience (Reviews 1 papers)
5. CMC-Computers, Materials & Continua (Reviews 1 papers)
6. Journal of Cheminformatics (Reviews 1 papers)
7. Scientific Report- (Reviews 1 papers)
8. The Protein Journal (Springer- Reviews 1 papers)
9. BMC Infectious Diseases (Springer- Reviews 1 papers)
10. Discover Applied Sciences (Springer- Reviews 1 papers)

RESEARCH PROFILE ON WEB OF SCIENCE:

- Web of Science Researcher ID: AGX-6694-2022
- <https://publons.com/researcher/AGX-6694-2022/>
- <https://orcid.org/0000-0001-5166-2213>
- https://www.researchgate.net/profile/Ali_Ghulam6
- <https://scholar.google.com.pk/citations?user=YoxiSCkAAAAJ&hl=en>
- Published Impact Factor: 60.569

PUBLICATIONS STATISTICS:

- I have published over 25 peer-reviewed publications and 12 publications as first author.
- My publications have over 101 total citations and an h-index of 7.
- A complete list of my publications can be found on my Google Scholar page.

CURRENT RESEARCH PROJECTS UNDER WRITING PHASE:

- Precision Agriculture and Automation in Mango Orchards by using Artificial Intelligence (PAAMO-AI)

- Disease Prediction of Mango Crop of Sindh Based on Machine Learning algorithms and IoT
- Multiple Crops Disease Prediction Based on Machine Learning Approaches (MCDP-MLA)
- Plants Disease Detection Board on Using Deep Learning (PDD-UDL)

RESEARCH SKILLS:

Data Science

- 5+ years' experience as a data scientist
- Data visualization expert
- Expert with Python ecosystem: NumPy, SciPy, pandas, matplotlib, Seaborn, Jupyter, BeautifulSoup, NetworkX, and PyRWR, PyGad
- DNA Sequence Extraction
- Proteins Sequence Extraction
-

FOCAL PERSON:

Dr. Ghulam Ali

Focal Person (Coursera license via HEC's portal)

DLSEI program of HEC, Pakistan

Digital Learning & Skills Enrichment Initiative (DLSEI)

TRAINING/COURSES:

- **Training of Trainers (ToT) 5- Days Workshop for Faculty Members-** Under the Faculty Development Program - Sindh HEC, Held from **21st to 24th October 2024**.
- **"Certificate of Appreciation"** Meritorious and innovative work in the implementation of the **DLSEI Programme** **Higher Education Commission of Pakistan in the year of 2023**. Fostering skill development in university students.
- **"Certificate of Participation" 2-Day Faculty entrepreneurial development program** RISE organized by, National Incubation Centre, Hyderabad on 4th and 5th October 2023
- **"Completion Certificate" In-Service Regional Faculty Professional Development Program, Awarded by National Academy of Higher Education (NAHE), Higher Education Commission (HEC), Islamabad** ISRFPD-NAHE Held at HEC Regional Centre, Karachi, July 04th- 20th, 2023
- **"SQL Server & Azure"** Microsoft's comprehensive data platform, SQL Server delivers Training Session, Resource Center, Murree, on 29th August to 31st August 2016, by Higher Education Commission.

- **“Azure and Office 365”** training Azure and Office 365 Training Session, MIC Bahria University Karachi, at Karachi on 1st to 2nd June 2016, by Higher Education Commission.
- **“IT Management”** training funded by the Tertiary Education Support Program (TESP) of Higher Education Commission (HEC), August 10-13, 2015 at Main Campus, Institute of Business Administration (IBA), University of Karachi, Karachi.
- **“Basic Chinese Language Program (BCL-II)”** Virtual Education Project Pakistan Program (VEPP), Collaboration with the Confucius Institute of Chinese Language at Islamabad, and L.E.J National Science Information Center, International Center for Chemical and Biological Science, University of Karachi. November 18, 2014, April 9, 2015.
- **“Microsoft E-Learning Portals” (Educational Alliance Agreement** between HEC and Microsoft) by Higher Education Commission Regional Centre Lahore Half day workshop/Training (14th Nov. 2014) Zaigham Ikram Butt - MIC Lead, Microsoft
- **“HEC Business Intelligence Dynamic Reporting System” (BI-DRS) and Online Statistics Application**
By Higher Education Commission Regional Centre,
At MUET Jamshoro
02 days workshop/Training (23rd – 24th May 2013)
- **“HTML5 & CSS3” from Microsoft**
HEC- Higher Education Commission Regional Centre, Lahore Pakistan
02 days’ workshop/Training /12/1/2012 to 13/1/2012
- **“Alumni Association Customization & Configuration” from HEC**
HEC- Higher Education Commission, Islamabad Pakistan,
On date:14-06-2010 to 15-06-2010
- **“Alumni Relations and Communication” from HEC**
HEC- Higher Education Commission, Karachi-Pakistan
- **“Oracle 10As Portal Build Corporation” from Oracle University**
May 2006. 190-A, S.M.C.H.S., Shahrah-e-Faisal Karachi – 74400, Pakistan
- **“Oracle 10As Portal Build Corporation” Portlet with Java from Oracle University**
13st Nov 2006. 190-A, S.M.C.H.S., Shahrah-e-Faisal Karachi – 74400, Pakistan

- “**Web Development Training**” from Infobeam Software Development And Training Centre Karachi Gulistan-e-Johar. 1st Feb 2004 to 30th April. 2005.
- “**Special Designing Course,**” from Capital Computer Training Division. Islamabad.

HONOR & AWARDS:

- “**CSC Full Scholarship**” 2017-2020,
China Govt Scholarship Council, for Doctoral Degree.
- “**All Pakistan Website Competition**” 3rd Position,
Presidential Iqbal Awards (national and international) IAP Lahore Pakistan.
- “**Awards of Prime Minister of Pakistan**” Shield for securing 3rd position in Iqbal Academy Lahore. “**2nd Multimedia Website Development competition**”, by Allama Iqbal Academy, Lahore, Pakistan. The **Honorable Prime Minister of Pakistan** Mr. Yusuf Raza Gilani awarded Shield, Cash Prize and Certificate

EXPERIENCE:

ASSISTANT PROFESSOR

Information Technology Centre

Worked at **Sindh Agriculture University Tando Jam.**

From 01st April-2023 to Continue

My responsibilities included: -

Worked on ITC Centre, teaching Specialization Bioinformatics, AI, Deep learning, Machine learning, and computational professional practices.

LECTURER

Information Technology Centre

Worked at **Sindh Agriculture University Tando Jam.**

From 01st November-2022 to 30 March-2023

My responsibilities included: -

Worked on ITC Centre, teaching Specialization Bioinformatics, AI, Deep learning, Machine learning, and computational professional practices.

WEBMASTER

Web Graphics Designer and Web Developer

Worked as a at **Sindh Agriculture University Tando Jam.**

From 20st April -2007 to 30 October, 2022

My responsibilities included: -

Worked on Web Site Development and Graphics Designing, and WordPress, Joomla, SEO/ PHP 5, AJAX, My SQL, Flash Scripting, HTML, DHTML, CSS, Apache Tomcat, IIS Server, Personal Web Server, and Uploading, downloading.

Course Taught:

Subject Teaching

- Artificial Intelligence (ITC-606)
- Advanced Artificial Intelligence (AI- 717)
- Foundational Mathematics and AI (AI- 720)
- Bioinformatics. ITC: 501 Credit hours (3:00)
- Computation Professional Practices ITC: 604 Credit hours (3:00)
- Fundamental Programming, CS: 303 Credit hours (3:+1)
- Object Oriented Programming, Computer Science Batch
- Object Oriented Programming, Software Engineering Batch

INTERNATIONAL CONFERENCE:

Conference Website Development

2025 International Conference on Data-Driven Social Change (**ICDDSC-2025**)
18-19, February 2025 - Sindh, Pakistan

Conference Website Development

1st International Conference On Biodiversity Of Arid Zone (Icbaz-2023)
First & Largest Conference On (Current Scenario And Future Perspectives)
March, 07-08, 2023 / Sindh, Pakistan

Conference Website Development

1st International Conference on Plant Protection Sciences (ICPPS-2022)
March 29, 30 2022

COMMITTEES/ MEMBER:

- Two International Organizationing Committee Member
- University Admissions Entry Test Management Committee Member
- Final Year Project Display Committee Member
- 1st International Conference on Biodiversity of Arid Zone (Icbaz-2023) (Development)
- 1st International Conference on Plant Protection Sciences (ICPPS-2022) (Development)

- Sindh Agriculture University, official website development committee member

FOCAL PERSON ASSIGNMENT:

- Focal Person (Office 365) HEC
- Focal Person (DELSI) HEC

PROFESSIONAL EXPERIENCE

WEBMASTER

Web Graphics Designer and Web Developer

Worked as a at **Sindh Agriculture University Tando Jam.**

From 20st April -2007 to 30 October, 2022

My responsibilities included: -

Worked on Web Site Development and Graphics Designing, and WordPress, Joomla, SEO/ PHP 5, AJAX, My SQL, Flash Scripting.Html, Dhtml, CSS, Apache Tomcat, IIS Server, Personal Web Server, and Uploading, downloading.

WEB DEVELOPER

Web Graphics Designer and Web Developer

Worked as at **Sindh on farm water Management Project Information Kiosks, (SIDA).**

From 01st June -2008 to 31st December -2008 (Part Time)

My responsibilities included: -

Daily work of SIDA documentation and uploading information of FOs, Rotation Plan, Training Status, and Worked on Web Site Development and Graphics Designing, and Flash Scripting.Html, Dhtml, CSS, Apache Tomcat, IIS Server, Personal Web Server, and Uploading, Downloading.

Senior Web Developer

Worked at **Ora-Tech System Karachi**, as a senior web Developer/Team Lead. From 15th June to Continue

My responsibilities included: -

To Design and Develop the Web Sites for all Thirty Departments of Government of Sindh and also Design and Develop the Web sites for all twenty-three Districts Government of Sindh. My job description is more inclined towards portal administration where I solve our valued web portal problems on a daily basis. My job description also includes leading a team of two web developers who are employs in regard to Oracle web portal, their concepts, and development.

Assistant System Developer

Worked as a Assistant System Developer at **Alpha Insurance Company Ltd.** State Life Building

1-B, I.I. Chundrigar Road Karachi. From 11th May -2005 to 31st May-2006

My responsibilities included: -

Worked on Visual Studio.Net 2003, Oracle 9i, And Crystal Report 10. And Under Writing System And also develop the Insurance Policies of Motor departments, Policy Certificates, Endorsement Certificate, and Deceleration Certificate, and also Marine Departments, Fire Departments, Miscellaneous Departments, and also printing policies.

Web Graphics Designer and Web Developer



Worked at **Infobeam Software Development and Training Centre** Gulistan-e-Johar Karachi.

From 1st Feb -2004 to 30th April-2005

My responsibilities included: -

Worked on Web Site Development and Graphics Designing, and FlashScripting.Html, Dhtml, CSS, Apache Tomcat, IIS Server, Personal Web Server, and uploading, downloading.

CERTIFICATIONS: SPECIALIZATION IN CMS BASED TECHNOLOGIES

Name of Test	Score	Percentile	Date Taken	Duration
 Wordpress Test	2.75	67%	05/10/2011	36 min
 Joomla! 1.5 Test	2.50	24%	05/08/2011	30 min

Description:

Certified Developer

Expert WordPress developer, I did designed lot of websites and layouts, I have experienced SEO, and I have good experience, Joomla, WordPress, and CSS, and CMS. I am working as Designer and Developer and good Data Entry Professional.

SOCIAL NETWORK MARKETING:

- Facebook (Using for marketing like fan pages of any company and get large traffic)
- Twitter (Using for marketing twitter pages of any company and get large traffic)
- Stumble (Using for marketing stumble pages of any company and get large traffic)
- Digg (Using for marketing Digg pages of any company and get large traffic)

RESEARCH PROGRAMMING/ TOOLS:

Languages : Python, Spyder, PyTorch, Notebook, PyCharm, R Studio, Matlab

SOFTWARE LANGUAGES/TOOLS:

Languages ADO Dot Net, JSP, C.	:	Python, R, Matlab, Orange, VB 6.0, VB Dot Net 2003, ASP, PHP,
Databases Sybase.	:	MySQL, Sybase, Access 2000, Oracle, SQL Server 2003, MySQL 5.0,
Operating Systems Linux	:	Windows 11, Windows 10, Server, Windows XP, Windows-98, DOS.
Web Development	:	PHP, PHP.net, PHPAdmin Manager, ASP, JSP Tomcat Server, IIS. Mx Dream Weaver, Mx Flash MX 2005, Adobe Photo Shop.

OTHER ACTIVITIES:

- Training Web Portal at Ora-Tech System.
- Working Insurance under Writing System.
- Browsing, Surfing, Uploading, Downloading, Research IT field.
- Scripting Languages JavaScript, Cascading Style Sheets (CSS)
- Freelancer using Upwork and elance.com from last 3 years, have done lot of projects.
- Using Google AdSense and get traffic.
- Play Cricket (Sports)

PERSONAL INFORMATION:

Father's Name	:	Haji Khan Rahu
Languages	:	English, Urdu, Sindhi
Date of Birth	:	02-02-1982
N.I.C. #	:	45403-0810354-9
Marital Status	:	Single
Domicile	:	Sindh (R)
Contact #	:	Cell No-0300-3219350
Mailing Address	:	Information Technology Centre Sindh Agriculture University, Tandojam.
Reference	:	Dr. Mir Sajjad Hussain Talpur Professor Information Technology Centre, SAU, Tandojam
Reference	:	Dr. Zulfikar Ahmed Maher Assistant Professor Information Technology Centre, SAU, Tandojam