

Rafiullah Khan, Ph.D. Lecturer

ICS/IT, The University of Agriculture, Peshawar, Pakistan

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▼ Biographical Sketch

I currently work as a **Lecturer** at ICS/IT The university of Agriculture Peshawar. I have recently completed **Post-Doc** fellowship at the School of Computing, **Macquarie University, Australia**. With **over 17 years** of teaching experience and more than **10 years of research** experience, I have held a lecturer position at various institutions. In 2020, I earned my PhD in Computer Science from the Capital University of Science and Technology, Islamabad, Pakistan. During my tenure at ICS/IT, the University of Agriculture Peshawar, I contributed significantly as a member of the Board of Studies, Purchasing Committee, Proctorial Board, and BS program coordinator for 5 years. Throughout my career, I have **supervised 17 Master's** and over **80 bachelor's** level students, and I am currently supervising **3 PhD scholars**. I am passionate about **curriculum development** and have proposed **3 new courses for PhD and Master's-level** degrees at the University of Agriculture Peshawar. Furthermore, I was pivotal in **developing and creating content** for the new master's level course "**IoT Communication Networks and Security**" at **Macquarie University, Australia**. At present, I am engaged in **teaching and tutoring** various courses at Macquarie University, Sydney. My research contributions include publishing over **30 research papers** and **4 chapters** and **authoring an edited book**.

▼ Personal and Contact Information

LinkedIn: www.linkedin.com/in/rafiullah-khan-49359a127/

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Google Scholar: <https://scholar.google.com/citations?user=iHW8mAkAAAJ&hl=en>

▼ Research Interests

Cyber Security, Privacy, Machine Learning, Data Science, Internet of Things

▼ Education

POSTDOC Privacy and Machine Learning (2025)

School of Computing, Macquarie University, NSW, Australia

PH.D. COMPUTER SCIENCE (Cybersecurity and Privacy) (CGPA 3.56/4.0)

Capital University of Science and Technology, Islamabad, Pakistan. 2020

Thesis Title: [On the Effectiveness of Private Information Retrieval Protocols](#)

MS Information Technology (Internetworking and Digital Communication) (CGPA 3.5/4.0)

Institute of Management Science, Peshawar, Pakistan. 2010

Thesis Title: Conceptual Frame Work of Multi-Bandwidth Link Aggregation

BS (Hons) of Computer Science (CGPA 3.7/4.0)

Islamia College, University of Peshawar, Pakistan. 2007

Thesis Title: Performance Evaluation of Peshawar University Computer Network and Suggestions for Optimization

▼ Professional Education

- Begin To Teach, Macquarie University Sydney 2023.
- Google Data Analytics 2023.
- Cisco Certified Network Professional (CCNP) Switching 2009.
- Cisco Certified Network Professional (CCNP) Routing 2008.
- Cisco Certified Network Associate (CCNA) 2007.

▼ Teaching and Administrative Experience

May 2023 – June 2025

1. Visiting Fellow/ Casual Lecturer • School of Computing, Macquarie University, NSW, Australia.

September 2011 – To Date

2. Lecturer • BS Program Coordinator • ICS&IT, The University of Agriculture Peshawar, Pakistan.

January 2009– September 2011

3. Lecturer • BCS Program Coordinator • Farabi College, Peshawar, Pakistan.

May 2007 – December 2008

4. Lecturer • Preston University, Peshawar Campus, Pakistan.

February 2011 – September 2011

5. Visiting Lecturer • Iqra National University, Peshawar, Pakistan.

February 2009 – June 2009

6. Visiting Lecturer • Allama Iqbal Open University, Peshawar Campus, Pakistan.

▼ Projects

Sno	Title	Abstract	Funding Party and Year	Amount of Fund	Status
1	3D Virtual MMOG (Massively Multi-Player Online game) for Distance Learning As PI	The power behind the virtual worlds is that sense of togetherness. 3D Virtual worlds have the potential to fill the wide gap between face-to-face interactions, which is the richest form of communication we can experience and disembody forms such as email, text, instant messages, and even the telephone. We are increasingly seeing a blur between our offline and online selves, while today's learning curve is steep. Virtual worlds like Second Life and OpenSim etc., will promise a new era in human interaction and communication. The project aimed to create a Virtual Campus of the University of Agriculture Peshawar, which provides the students' facilities as mentioned earlier.	National ICT/R&D, Ministry of Information Technology, Government of Pakistan	Rs. 100,000/-	Completed 2014
2	Mobile Auction App for KP Agriculture Research Centers As PI	Online auction sites are the "marketplaces" where customers can participate in the online bidding process for a product over a specified period without temporal or spatial constraints. In Khyber Pakhtunkhwa (KPK), Pakistan, the auction of Agricultural products at Agricultural Research Stations is done using the traditional auction method. We built a smartphone app for Agricultural Research Stations of KPK that enables the users to take part in a bidding process without being physically available. Moreover, after bidding, the user has the option to pay online and or pay on delivery. This app will also keep users updated about new arrivals and future biddings.	National ICT/R&D, Ministry of Information Technology, Government of Pakistan	Rs. 100,000/-	Completed 2014
3	One-Click Rescue As PI	In an emergency, people usually forget how to call for help and their whereabouts due to multiple reasons such as shock, trauma, and other reasons. We built the "One Click Rescue" app to solve this problem. This app will only take a type of emergency (such as medical, fire, hostage) from the person who needs help, and that is it. The smartphone will do the rest, such as 1. Contact the nearest emergency response center, 2. Sending location of the emergency using GPS, 3. Sending messages to the specified closest relatives, and 4. Activate the silent profile of the smartphone in case of a hostage situation.	National ICT/R&D, Ministry of Information Technology, Government of Pakistan	Rs. 100,000/-	Completed 2015

▼ Conferences (Participated or Attended)

Sno	Conference Name	University	Venue	Year
1	Symposium on Emerging Technologies In Information Technology (ETIT) 2013	The University of Peshawar.	Baragali Pakistan.	2013
2	International Conference on Emerging Technologies (ICET) 2013	Muhammad Ali Jinnah University, Islamabad.	Islamabad Pakistan.	2013
3	International Conference on Innovating Computing Technology (INTECH) 2016 (Participated)	Islamia University Bahawalpur.	Islamabad Pakistan.	2016
4	4th International Conference on Biological and Computer Sciences (CBICS) 2016 (Participated)	Capital University of Science and Technology	Islamabad Pakistan.	2016

5	Frontiers of Information Technology (FIT) 2016	COMSATS Institute of Information Technology	Islamabad Pakistan.	2016
6	International Conference on Emerging Trends in Engineering, Management and Sciences (ICETEMS) 2016 (Participated)	City University of Science and Technology	Peshawar Pakistan.	2016
7	International Conference on Communication, Computing and Digital Systems (CCODE) 2017 (Participated)	Bahria University Islamabad.	Islamabad Pakistan.	2017
8	International Conference on Emerging Technologies (ICET) 2017	Capital University of Science and Technology.	Islamabad Pakistan.	2017
9	International Conference on Computing Technologies, Tools and Applications (ICTAPP-23) 2023. (Keynote Speaker, Organizer, Reviewer)	ICS/IT, The University of Agriculture Peshawar.	Peshawar Pakistan	2023
10	The 20th International Conference Advanced Data Mining and Applications 2024. (Member Organizing Committee, Reviewer)	Macquarie University	Sydney, Australia	2024

▼ Graduated MS Students

Sno	Student Name	Thesis Title	Year
1	Faiz ur Rahman	Evaluation Of Non-Fading Propagation Models Over A Reactive Based Routing Protocol In Ad Hoc Networks	2013
2	Misbah Daud	Roman Urdu Opinion Miner: An Opinion Based Customer Decision Support System	2014
3	Jamila Khan	Impact Of Node Density On The Performance Of DSR And FSR Using Random Way Point Mobility Model.	2015
4	Fakhra Khan	Handling Agriculture Products Auction Activity Of Khyber Pakhtunkhwa Research Stations For Mobile Users	2015
5	Emran Thabet	Analyzing Political Situation From Social Network Reviews Of Yemeni People Using Data Mining Techniques	2018
6	Maria Noor	Performance Evaluation Of Mobility Models In DTN With Dense And Sparse Mode	2018
7	Shafiullah	Analysis Of Temporal Interest Of America Online (AOL) User Based On Web Search History	2019
8	Ibad Jan Babu	A Proposed Mechanism For Domain-Based Text Classification Using Terms Similarity Score	2019
9	Basheer Ahmad	Rainfall Prediction Using Chaotic Bat Back Propagation Algorithm	2019
10	Haidar Zaman	Feature-Based Sentiment Analysis Spam Detection Of Roman Urdu Reviews	2019
11	Maneela Shaheen	Automatic Classification Of Acute Myeloid Leukemia (AML) Using Convolution Neural Network	2021
12	Shabana Gul	A Novel Framework For Detection Of Scripted Urdu Sarcastic Opinions From The Twitter	2022
13	Roman Aftab	TIP Rank: Twitter Influential Person Ranking	2022
14	Muhammad Kashif	Cluster Head Optimization Technique in Heterogeneous Wireless Sensor Network	2022
15	Sajjad Ullah Khan	Optimization technique for the scheduling of Home appliances considering demand side management	2022
16	Ijaz Ahmad	Covid-19 Infection Detection in Chest X-Ray Images Using Resnet50-Based Transfer Learning Approach	2022
17	Muhammad Irfan	Profile Based Sarcasm Detection In Twitter (X)	2023

▼ Communication

Sno	Language	Speaking	Reading	Writing
1	English	Good	Good	Good
2	Urdu	Good	Good	Good
3	Hindi	Good	Poor	Poor
4	Pashto	Good	Average	Average
5	Hindko	Average	Poor	Poor
6	Panjabi	Average	Poor	Poor

▼ Publications

Journal Publications

1. Younas, Agsa, Shazia Riaz, Saqib Ali, **Rafiullah Khan**, Mohib Ullah, and Daehan Kwak. "Stacked LSTM Model for Contextual Correlation Detection Among Multiple Emotions." IEEE Access (2025). (**3.4 Impact Factor**).
2. Younas, Nazish, Shazia Riaz, Saqib Ali, **Rafiullah Khan**, Farman Ali, and Daehan Kwak. "Detecting malicious code

- variants using convolutional neural network (CNN) with transfer learning." PeerJ Computer Science 11 (2025): e2727. **(3.8 Impact Factor)**.
3. Fatima, Nayab, Shazia Riaz, Saqib Ali, **Rafiullah Khan**, Mohib Ullah, and Daehan Kwak. "Sensors Faults Classification and Faulty Signals Reconstruction Using Deep Learning." IEEE Access (2024). **(3.4 Impact Factor)**.
 4. S. Zahir, **Rafi Ullah Khan**, M. Ullah, M. Ishaq, N. Dilshad et al., "Robust Counting In Overcrowded Scenes Using Batch-Free Normalized Deep Convnet," Computer Systems Science and Engineering, vol. 46, no.3, pp. 2741–2754, 2023. **(4.397 Impact Factor)**.
 5. Sana Zahir, Arbab Waseem Abbas, **Rafi Ullah Khan**, Mohib Ullah (2023). Vision Sensor Assisted Fire Detection in IoT Environment using ConvNext. Journal of Artificial Intelligence and Systems, 5, 23–35. <https://doi.org/10.33969/AIS.2023050102>.
 6. Akbar, M, Ullah, M, Shah, B, **Rafi Ullah Khan**, Hussain, T, Ali, F, Alenezi, F, Syed, I, and Kwak, K. "An Effective Deep Learning Approach for The Classification of Bacteriosis in Peach Leave". Frontiers in Plant Science, Vol 13, Nov 2022. **(6.627 Impact Factor)**.
 7. Al-Buraihy, E, Dan, W, **Rafi Ullah Khan**, and Mohib Ullah. "An ML-Based Classification Scheme for Analyzing the Social Network Reviews of Yemeni People". International Arab Journal of Information Technology Vol: 16, No. (6) November 2022. **(0.967 Impact Factor)**
 8. Gul, Shabana, **Rafi Ullah Khan**, Mohib Ullah, Roman Aftab, Abdul Waheed, and Tsu-Yang Wu. "Tanz-Indicator: A Novel Framework for Detection of Perso-Arabic-Scripted Urdu Sarcastic Opinions." Wireless Communications and Mobile Computing 2022 (2022). **(2.146 Impact Factor)**.
 9. Ullah, Mohib, **Rafi Ullah Khan**, Irfan Ullah Khan, Nida Aslam, Sumayh S. Aljameel, Muhammad Inam Ul Haq, and Muhammad Arshad Islam. "Profile Aware ObScure Logging (PaOSLo): A Web Search Privacy-Preserving Protocol to Mitigate Digital Traces." Security and Communication Networks 2022. **(1.791 Impact Factor)**.
 10. Ihsan, Imran, Mohib Ullah, **Rafi Ullah Khan**, et al. "SEAL: Semantically Enriched Authoring in LATEX—A Model for Scientific Discourse." IEEE Access 10 (2022): 13525-13535. **(4.06 Impact Factor)**.
 11. Farooq, Umer, Mohib Ullah, **Rafi Ullah Khan**, et al. "IDBR: IoT Enabled Depth Base Routing Method for Underwater Wireless Sensor Network." Journal of Sensors 2021 **(3.576 Impact Factor)**.
 12. Khan IU, **Khan Rafiullah**, et al. "Remote Diagnosis and Triaging Model for Skin Cancer Using EfficientNet and Extreme Gradient Boosting," Complexity, vol. 2021, 2021. **(2.462 Impact Factor)**.
 13. Ullah M, **Khan Rafiullah**, et al. "Multi-Group ObScure Logging (MG-OSLo) A Privacy-Preserving Protocol for Private Web Search", Journal: IEEE Access. **(4.06 Impact Factor)**.
 14. Shaheen M, **Khan Rafiullah**, Biswal R R, Ullah M, Khan A, Irfan M, "Acute Myeloid Leukemia (AML) Detection Using AlexNet Model" Journal: Complexity. **(2.462 Impact Factor)**.
 15. Ullah R, Abbas A W, Ullah M, **Khan Rafiullah**, Aslam N, Aljameel S, Ullah I. "EEWMP: An IoT Based Energy Efficient Water Management Platform for Smart Irrigation", Journal: Scientific Programing. **(0.963 Impact Factor)**.
 16. **Rafiullah Khan**, Mohib Ullah, Atif Khan, Muhammad Irfan Uddin, Maha Al-Yahya, "NN-QuPiD Attack: Neural Network-Based Privacy Quantification Model for Private Information Retrieval Protocols," Complexity, vol. 2021, 2021. **(2.462 Impact Factor)**.
 17. Haq, N. U., Ullah, M., **Khan, Rafiullah**, Ahmad, A., Almogren, A., Hayat, B., & Shafi, B. (2020). USAD: An Intelligent System for Slang and Abusive Text Detection in PERSO-Arabic-Scripted Urdu. Complexity, 2020. **(2.462 Impact Factor)**.
 18. Ahmad, Y., Ullah, M., **Khan, Rafiullah**, Shafi, B., Khan, A., Zareei, M., & Mohamed, E. M. (2020). SiFSO: Fish Swarm Optimization-Based Technique for Efficient Community Detection in Complex Networks. Complexity, 2020. **(2.462 Impact Factor)**.
 19. **Khan, Rafiullah**, et al. "QuPiD Attack: Machine Learning-Based Privacy Quantification Mechanism for PIR Protocols in Health-Related Web Search." Scientific Programming (2020). **(0.963 Impact Factor)**.
 20. **Khan, Rafiullah**, Islam, M. A., Ullah, M., Aleem, M., & Iqbal, M. A. (2019). Privacy Exposure Measure: A Privacy-Preserving Technique for Health-Related Web Search. Journal of Medical Imaging and Health Informatics, 9(6), 1196-

1204. **(0.659 Impact Factor)**.

21. Ullah, M., Islam, M. A., **Khan, Rafiullah**, Aleem, M., & Iqbal, M. A. (2019). ObSecure Logging (OSLo): A Framework to Protect and Evaluate the Web Search Privacy in Health Care Domain. *Journal of Medical Imaging and Health Informatics*, 9(6), 1181-1190. **(0.659 Impact Factor)**.
22. Shah, S., Saeed, K., Khan, M., Khan, **Khan, Rafiullah**, M. U., Daud, M., & Abbas, A. W. (2018). Minimization of Information Asymmetry Interference using Partially Overlapping Channel Allocation in Wireless Mesh Networks. *International journal of advanced computer science and applications*, 9(8), 626-634.
23. Daud, M, **Khan, Rafiullah**, & Daud, A. (2015). Roman Urdu opinion mining system (RUOMiS). *Computer Science & Engineering: An International Journal (CSEIJ)*. 4(5/6), 1-9.
24. **Khan, Rafiullah**, & Ali, S. (2013). Conceptual Framework of Redundant Link Aggregation. *Computer Science & Engineering: An International Journal (CSEIJ)*. 3(5), 23- 31.

Conference Publications

1. Ullah H, Bangash J I, Rahman J U, **Khan Rafiullah**, Khan A W, Din R U. IoT Based Indoor Monitoring Framework to Reduce the Effects of Passive Smoking, *International Conference on Computing Technologies, Tools and Applications (ICTAPP-23)* 2023.
2. Ullah S A, Ullah M, **Khan Rafiullah**, Ullah K, Ahmad Y, Rehman A U. Educational Data Mining: A Comparative Study to Predict Student Academic Performance Using Deep Neural Network and Other Machine Learning Techniques, *International Conference on Computing Technologies, Tools and Applications (ICTAPP-23)* 2023.
3. Ullah S A, Abbas A W, Ullah M, **Khan Rafiullah**, Rehman A U. Unveiling the Power of Deep Learning: A Trailblazing Review on Different Techniques used for Medical Image Segmentation Analysis, *International Conference on Computing Technologies, Tools and Applications (ICTAPP-23)* 2023.
4. Ali I, Nawaz S, Ullah M, **Khan Rafiullah**, Tariq M, Din I U, Khan A, Khalil G R, Khan M. Software Cost Estimation: A Comparative Study of COCOMO-II, Halstead and IVR Models. *International Conference on Computing Technologies, Tools and Applications (ICTAPP-23)* 2023.
5. Siddique M, **Khan Rafiullah**, Ullah M, Tamimy M I, Haris M. Speech Emotion Recognition using Diffusion Map- Based Machine Learning with Classification Technique. *International Conference on Computing Technologies, Tools and Applications (ICTAPP-23)* 2023.
6. **Khan, Rafiullah**, & Islam, M. A. (2017, March). Quantification of PIR protocols privacy. In *2017 International Conference on Communication, Computing and Digital Systems (CCODE)* (pp. 90-95). IEEE.
7. **Khan, Rafiullah**, Ullah, M., & Islam, M. A. (2016, August). Revealing PIR protocols protected users. In *2016 Sixth International Conference on Innovative Computing Technology (INTECH)* (pp. 535-541). IEEE.
8. Ullah, M., Khan, **Khan, Rafiullah**, & Islam, M. A. (2016, August). Poshida, a protocol for private information retrieval. In *2016 Sixth International Conference on Innovative Computing Technology (INTECH)* (pp. 464-470). IEEE.
9. Ullah, M., Khan, **Khan, Rafiullah**, & Islam, M. A. (2016, December). Poshida II, a Multi-Group Distributed Peer to Peer Protocol for Private Web Search. In *2016 International Conference on Frontiers of Information Technology (FIT)* (pp. 75-80). IEEE.
10. **Khan, Rafiullah**. (2016, December). De-Anonymizing User of Web and Social Network. In *4th International Conference on Biological and Computer Sciences (C-BICS 2016)*.
11. Khan, S, Ullah, M & **Khan, Rafiullah**. (2016, December) The Performance Evaluation of MANET Protocol under varying Pause time and Simulation Area. In *2nd International Conference on Emerging Trends in Engineering, Management and Sciences*.
12. Naz, J, **Khan, Rafiullah** & Ullah, M. Impact Assessment of Node Density over FSR and DSR. (2016, December) The Performance Evaluation of MANET Protocol under varying Pause time and Simulation Area. In *2nd International Conference on Emerging Trends in Engineering, Management and Sciences*.

Book Chapter

1. Javeed, D., Gao, T., Saeed, M. S., **Khan, R. U.**, & Jamil, Z. (2023). SDSCCM: Secure Distributed System

Communication for Cloud-Based Manufacturing. In Protecting User Privacy in Web Search Utilization (pp. 200-214). IGI Global.

2. **Khan, Rafi Ullah**, Mohib Ullah, and Bushra Shafi. "Web Search Privacy Evaluation Metrics." Protecting User Privacy in Web Search Utilization. IGI Global, 2023. 46-62.
3. **Khan, Rafi Ullah**, et al. "A Survey on Performance Evaluation Mechanisms for Privacy-Aware Web Search Schemes." Protecting User Privacy in Web Search Utilization. IGI Global, 2023. 26-45.
4. **Khan Rafiullah**, et al. "Knocking at Alternate Doors: Survey of Android-Based Smartphone Applications for Alternate Medicines." Mobile Devices and Smart Gadgets in Medical Sciences. IGI Global, 2020. 22-38.

Books

1. **Khan, Rafi Ullah**, ed. Protecting User Privacy in Web Search Utilization. Hershey, PA: IGI Global, 2023. <https://doi.org/10.4018/978-1-6684-6914-9>

▼ Courses Proposed and Curriculum Development

Course Title	Level	Institute Name
IoT Communication Network and Security	Masters IT in IoT	Macquarie University, Sydney, Australia
Anonymity and Privacy	Masters Computing	ICS/IT, The University of Agriculture Peshawar, Pakistan
Text Mining and Analytics	Masters Data Science	ICS/IT, The University of Agriculture Peshawar, Pakistan
Private Information Retrieval	Masters Computing	ICS/IT, The University of Agriculture Peshawar, Pakistan

▼ Programming Languages, Tools and Technologies

C, Java, R, Python, WEKA, SQL, XML, RDF, LaTeX, Microsoft Office.

▼ References

1. **Dr. Muhammad Arshad Islam**, Professor, Department of Computer Science, National University of Computer and Emerging Sciences, Islamabad, Pakistan. Phone:+92-51-111-128-128 Ext: 640 , Email: arshad.islam@nu.edu.pk
2. **Dr Xuyun (Sean) Zhang**, ARC DECRA Research Fellow, Senior Lecturer, Course Director for Cyber Security School of Computing, Faculty of Science and Engineering Macquarie University, Sydney, NSW 2109, Australia Email: xuyun.zhang@mq.edu.au, Ph: +61 02 9850 8229
3. **Dr. Rajan Shankaran**, Senior Lecturer, Course Director for Networks and IoT, School of Computing, Faculty of Science and Engineering Macquarie University, Sydney, NSW 2109, Australia Email: rajan.shankaran@mq.edu.au, Ph: +61 02 9850 9537
4. **Carl Svensson**, Lecturer, School of Computing, Faculty of Science and Engineering Macquarie University, Sydney, NSW 2109, Australia Email: carl.svensson@mq.edu.au, Ph: +61 02 9850 9571
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