

Muhammad Adnan Khan, Ph.D.

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1. SHORT BIO

MUHAMMAD ADNAN KHAN (Senior Member IEEE) is currently working as an **Associate Professor** at the School of Computing, **Skyline University College, Sharjah, UAE** & Riphah School of Computing and Innovation, Faculty of Computing, **Riphah International University, Lahore Campus, Lahore, Pakistan**, and **Assistant Professor** at the Department of Software, Faculty of Artificial Intelligence and Software, **Gachon University, Seongnam-si, Republic of Korea**. I completed my Ph.D. from ISRA University, Islamabad, Pakistan, by obtaining a scholarship award from the Higher Education Commission, Islamabad, Pakistan, in 2016. I also completed my M.Phil. & BS degrees from the International Islamic University, Islamabad, Pakistan by obtaining a scholarship award from the Punjab Information & Technology Board, Govt. of Punjab, Pakistan in 2010 and 2007 respectively. Before joining the above-mentioned Universities, Khan worked in various academic and industrial roles in Pakistan and the Republic of Korea. I have been teaching graduate and undergraduate students in computer science and engineering for the past **15 years**. So far, I have successfully supervised **11** Ph.D. students, **40+** M.Phil students & **70+** undergraduate students. Presently, I am guiding 05 Ph.D. scholars and 03 M.Phil. Scholars. I have published more than 240 research articles with Cumulative **JCR-IF 640+** in reputed International Journals as well as International Conferences. My research interests primarily include Machine Learning, Image Processing & Medical Diagnosis, Computational Intelligence, Artificial Intelligence, etc.

2. Professional Summary

1. **15 Years of Teaching Experience:** I have 15 years of teaching experience and taught various

courses at the undergraduate and graduate levels as mentioned in Section 6 (a). Moreover, I also designed the curriculum of various courses for Computer Science, Software Engineering, and Information Technology degrees at both undergraduate & graduate levels.

2. **Research Proposal Writing & Funding Acquisition Experience:** I have good experience in writing research project proposals—along with international collaborators—on various research topics and acquiring funding from national and international level funding organizations.
3. **International Collaboration Experience:** I have international collaboration experience in the UK, Hungary, UAE, KSA, Slovakia, Germany, France, Italy, South Korea, Pakistan, and China on different research projects, as reflected in my publications.
4. **Supervision Experience:** I am currently supervising **5** Ph.D. theses and **5** MPhil. thesis in the Computer Science Department at Riphah International University, Pakistan. So far, I have successfully supervised **11** Ph.D. students, **40+** M.Phil students & **70+** undergraduate students, as mentioned in the experience section.
5. **Participation in Thesis and Oral Examination Committees:** I have participated in 25 Ph.D., 60+ M.Phil/MS, and 90+ undergraduate thesis and oral examination committee members.
6. **Keen Interest in Experimentation:** I have a great passion for experimentation—especially on real systems and software services—and therefore I strongly believe that my interest in practical work along with my academic research and industry background experience and expertise will bring a competitive advantage to the project.
7. **2+ Years of Software Industry Experience:** I also have 2+ years of professional software development experience.
8. **Accumulated JCR-IF=640+:** An accomplished researcher in computational intelligence/soft computing, machine learning, image processing, digital communication, and signal processing.
9. **HEC Approved Supervisor:** Higher education communication Pakistan approved supervisor in physical sciences and artificial intelligence.
10. **Editorial Experience:** Guest editor of **12** special issues in well-reputed Journals.
11. **Academic Editor:** Computational Intelligence and Neuroscience, ISSN: 1687-5265, London, England, [IF= 3.633, ISI Indexed, Q1].
12. **Chief Editor:** International Journal of Computational and Innovative Science.
13. **Editor:** International Journal of Technology, Innovation, and Management, ISSN: 2789-777X, Dubai, UAE

14. **Editor:** iRSD Journal of Computer Science and Information Technology, Online ISSN: 2791-0628, Print ISSN: 2791-061X
15. **Member Advisor** (Interview), The Punjab Public Service Commission (PPSC), Pakistan.
16. **Member:** IEEE Senior Member, Lahore Section, Pakistan, R10 -Asia and Pacific. (Member ID: 96976705)
17. **Member:** Pakistan Engineering Council, Pakistan (ELECTRO/30832).
18. **Member:** Korean Research Information, Republic of Korea (Researcher ID: 12766347)
19. **H-index: 48, I-index: 136, and Total Citations: 6600+**
20. **According to Stanford University Scientist Rankings 2023**, my name has listed in the **top 0.8% of scientists in Pakistan**, **the top 3% in Asia**, and the **top 7% of world scientists**.
21. **Best University Research Award, Gachon University, Republic of Korea, 2021-2023.**
22. **Best Faculty Research Award, Faculty of Artificial Intelligence & Software, Gachon University, Republic of Korea, 2021-2022, 2022-2023.**
23. **Best Departmental Research Award, Department of Software, Gachon University, Republic of Korea, 2021-2022, 2022-2023.**
24. **Best University Researcher Award, Riphah International University, Lahore Campus, Lahore, Pakistan, 2020-2022.**
25. **Best University Researcher Award, Lahore Garrison University, Lahore, Pakistan, 2019-2020.**
26. **Best University Researcher Award, National College of Business Administration & Economics, Lahore, Pakistan, 2018-2019.**

3. FUNDING PROJECTS

As a Principle Investigator

- **Multi-user Detection using Computational Intelligence in Multi-Carrier Communication Systems.** Higher Education Commission, Government of Pakistan, 2012-2016. (PIN NO: EG7-030-2010, Amount: 1,510,000 PKR=18,200 USD, Completed).
- **Robust RLS-based MC-CDMA System.** Punjab Information Technology Board, Government of Pakistan, 2007-2010. (Proj No: OTS-201047210, Amount: 700,000 PKR=11,650 USD, Completed).

- **Smart Cattle Identification and Insurance Claim Management System Empowered With Computational Intelligence Approaches**, 2022 Consolidator Grant Program, National Research Foundation of Korea, Republic of Korea. (Project No: 2022013188, Amount: 600 Million Korean Won= 50, 53,500 USD, Submitted).

As a Co-Principle Investigator

- 1) **DIY (do it yourself) test for Covid 19 using AI**, (PI: Dr. MOHAMMED ALI A AL GHAMDI from Umm Al-Qura University, KSA, Co-PI: **Muhammad Adnan Khan**, Project No: 5-20-01-007-0012, Amount: 5,16,379 Saudi Riyal = 1, 37,500 USD. Completed).
- 2) **Empowering HealthCare 5.0 Data Communication Using Block-Chain Entangled Fusion-based Machine Learning Techniques**, ASPIRE Award for Research Excellence (AARE-2021). (PI: Dr. Mohammad Sh. Daoud from Al-AIN University, UAE, Co-PI: **Muhammad Adnan Khan**, Amount: 9, 86,000 UAE Dirham= 2, 68,500 USD).
- 3) **Deep Transfer Learning-Based Animal Face Identification Model Empowered with Vision-Based Hybrid Approach**, United Insurance Company of Pakistan Ltd. in collaboration with United Software and Technologies International (Pvt) Ltd. (Grant No. UICL-06-2022/USTI-RND-006/11/2022, Amount: 100,000 USD).
- 4) **IoT-based Multidisciplinary Cancer Diagnosing Empowered With Deep Learning**, National Natural Science Foundation China (NSFC), Beijing, China & The Pakistan Science Foundation (PSF) Islamabad, Pakistan. (PI (From China): Dr. Yi Wenhui from Xi'an Jiaotong University, China, PI (From Pakistan): Prof. Dr. Muhammad Zubair from Riphah International University, PAKISTAN, Co-PI: **Muhammad Adnan Khan**, 43,000 USD, Submitted).

As a Co-Investigator

- 1) **Hydrogen Storage In Dibenzyltoluene Empowered With Machine Learning**, National Research Foundation of Korea, Gachon University, Republic of Korea. (Project No: GCU-2017-0204, Amount: 2, 85,000 USD).
- 2) **Intelligent Disease Diagnosis System**, Basic Science Research Program through the National Research Foundation of Korea (NRF), funded by the Ministry of Education (Project No: 2021R1A1A03040177, Amount: 6, 85,000 USD).

- 3) **Machine Learning-based Solutions for Smart Home Networks Security**, Institute of Information and Communications Technology Planning and Evaluation (IITP) under the High-Potential Individuals Global Training Program Project No: 2021-0-01532, **Amount: 15,85,000 USD**).
- 4) **Intelligent and Reliable Intrusion Detection System for Heterogeneous Network**, National Research Foundation of Korea (NRF) under Grant, Korean Government through Ministry of Science and ICT (MSIT). (Project No: 2020R1A2B5B01002145, **Amount: 10,85,000 USD**).
- 5) **Design and Implementation of Intelligent Solution for Smart City**, Gachon University Research Fund, the Republic of Korea. (Project No: GCU-202206210001, **Amount: 6,85,000 USD**).
- 6) **Towards Parallel Selective Attention Using Psychophysiological States as the Basis for Functional Cognition**, Deanship of Scientific Research at Majmaah University, KSA. (Project No: R-2022-281, **Amount: 10,000 USD**).
- 7) **Development of AI-based Healthcare Devices**, GRRC program of Gyeonggi Province, Republic of Korea. (Project No: GRRCGachon2020 (B04), **Amount: 96,65,600 USD**).
- 8) **Modelling and Development of Artificial Intelligent based Applications**, Ministry of Culture, Sports and Tourism and Korean Creative Content Agency, Republic of Korea. (Project No: 2020040243, **Amount: 61,05,000 USD**).
- 9) **Indexing in WoT to Locate Indoor Things**, Majmaah University, Al-Majma'ah 11952, Saudi Arabia. (Project No: R-2023-376, **Amount: 7000 Saudi Riyal = 1850 USD**)

4. ACADEMIC/PROFESSIONAL PARTICULARS

(a) **Field of Specialization:**

- Computational Intelligence, Machine & Deep Learning, Digital Communication & Signal Processing.

(b) **Academic Qualifications**

Ph.D., Electronic Engineering

2016

Specialization: **Computational Intelligence**

ISRA University, Islamabad, Pakistan.

Thesis: [Multi-user Detection using Computational Intelligence in Multi-Carrier Communication Systems.](#)

(<http://pr.hec.gov.pk/jspui/handle/123456789//8007>) (Ph.D. Country Directory #14418)

CGPA: 4.00/4.00

MS, Electronic Engineering *2010*

International Islamic University, Islamabad, Pakistan.

Thesis: [Robust RLS-based MC-CDMA System.](#)

CGPA: 3.85/4.00

BS, Computer Science *2007*

International Islamic University, Islamabad, Pakistan.

Project: [Medical Tracking and Management System.](#)

CGPA: 3.32/4.00

c) Academic Honors and Awards

1. Indigenous Scholarship, Higher Education Commission, Government of Pakistan, 2012-2016.
2. Outstanding Talented Scholarship (OTS) from the Punjab Information Technology Board, Government of Pakistan, 2007-2010.
3. Outstanding Student Scholarship from International Islamic University, Islamabad in Semester Fall 2007, spring 2008, fall 2008, and spring 2009.
4. Best University Research Award, Gachon University, Republic of Korea, 2021-2023.
5. Best Faculty Research Award, Faculty of Artificial Intelligence & Software, Gachon University, Republic of Korea, 2021-2023.
6. Best Departmental Research Award, Department of Software, Gachon University, Republic of Korea, 2021-2023.
7. Best University Researcher Award, Riphah International University, Lahore Campus, Lahore, Pakistan, 2020-2022.
8. Best University Researcher Award, Lahore Garrison University, Lahore, Pakistan, 2019-2020.
9. Best University Researcher Award, National College of Business Administration & Economics, Lahore, Pakistan, 2018-2019.

5. EXPERIENCE

a) Academic Positions Held

Associate Professor

March. 2023 to date

Department of Computing, Skyline University College, University City of Sharjah – P.O. Box 1797 - Sharjah, United Arab Emirates.

Assistant Professor

April. 2021 to date

Pattern Recognition and Machine Learning Lab, Department of Software, Faculty of Artificial Intelligence & Software, Gachon University, 1342 Seongnamdaero, Sujeonggu, Seongnam, Gyeonggi-do 13120, South Korea.

Associate Professor

Nov. 2020 to date

Riphah International University, Lahore Campus, Lahore, Pakistan.

Associate Professor

Nov. 2019 to Oct. 2020

Lahore Garrison University, Lahore, Pakistan.

Assistant Professor

Jan. 2018 to Oct. 2019

National College of Business Administration & Economics, Lahore, Pakistan.

Assistant Professor

Oct. 2014 to Dec. 2017

Lahore Garrison University, Lahore, Pakistan.

Lecturer

Sep. 2008 to Sep. 2014

Comwave Institute of Science and Technology, Islamabad, DEC Sarhad University.

b) Administrative Positions Held

Head of Department (SE & IT)

Nov. 2017 to Dec.2017

Faculty of Information & Technology,
Lahore Garrison University, Lahore, Pakistan.

Head of Department (Electronics & Computing) Sept. 2012 to Sept.2014

Faculty of Engineering & Technology,
Comwave Institute of Science and Technology, Islamabad, DEC Sarhad University.

c) Membership in Professional Bodies

1. Member of IEEE, Lahore Section, Pakistan. **(96976705)**, Joining Date: 05/2023.
2. Member of Pakistan Engineering Council, Registered Engineer **(ELECTRO/30832)**, Joining Date: 05/2021.
3. HEC, Pakistan Ph.D. Approved Supervisor (Physical Sciences-Artificial Intelligence), Joining Date: 03/2019.
4. Member of Korean Research Information, Republic of Korea (Researcher ID: 12766347), Joining Date: 05/2021.

d) Professional/Industrial Positions Held

1. ***Associate Network Administrator*** Aug. 2007 to Sep. 2008 Pakistan
Software Export Board, Islamabad, Pakistan

2. **Developer** Oct. 2006 to Aug. 2007 Combined Military Hospital (CMH), Sargodha, Pakistan.

6. TEACHING

a) Summary of Selective Courses Taught

Course Title	Place Taught	Level
Fuzzy and Neural Networks	Minhaj University, Lahore	Advanced Graduate
Computational Intelligence	NCBA&E, LGU, and RIU	Advanced Graduate
Research Methodology	UCP, Lahore	Advanced Graduate
Advanced Machine Learning	NCBA&E, LGU, and RIU	Advanced Graduate
Advanced Soft Computing	NCBA&E, and RIU	Advanced Graduate
Advanced Operating System	FUUIT, Islamabad, LGU, NCBA&E, and BULC	Advanced Graduate
Advanced Analysis of Algorithm	LGU & NCBA&E	Advanced Graduate
Research Methods	LGU, Lahore	Graduate
Image Processing	LGU & NCBA&E	Senior Level Undergraduate
Data Structure & Algorithms	KICSIT, UET Taxila, LGU	Senior Level Undergraduate
Operating System	KICSIT, UET Taxila & AIOU	Senior Level Undergraduate
Digital Signal Processing	KICSIT, UET Taxila	Senior Level Undergraduate
Numerical Methods & Computing	KICSIT, UET Taxila	Senior Level Undergraduate
Physics-1	ISRA University, Islamabad	Senior Level Undergraduate
Digital Logic Design	ISRA University, Islamabad	Senior Level Undergraduate
Object-Oriented Programming	ISRA University, Islamabad	Senior Level Undergraduate
Complex Variable Transform	ISRA University, Islamabad	Senior Level Undergraduate
Artificial Intelligence	AIOU & IIU, Islamabad Gachon University, South Korea.	Senior Level Undergraduate
Database System	UoE, Lahore & Gachon University, South Korea.	Senior Level Undergraduate
Medical Image Processing	RIU	Advanced Graduate
Research Issues in Soft Computing	RIU	Advanced Graduate
Research Issues in Network Security	RIU	Advanced Graduate
Research Trends in Artificial Intelligence	RIU	Advanced Graduate
Intrusion Detection and Prevention Systems	RIU	Advanced Graduate
Research Issues in Intrusion Detection and Prevention Systems.	RIU	Advanced Graduate

b) Participation in Academic Accreditation

1. BS (CS), Team Head, Lahore Garrison University, Pakistan, National Computing Education Accreditation Council, 2 Years (01/16- 12/17).
2. MS (CS), Team Head, Lahore Garrison University, Pakistan, Higher Education Commission, Pakistan, 1 Year 09 Months (02/16- 10/17).
3. Ph.D. (CS), Team Head, National College of Business Administration & Economics, Lahore, Pakistan, Higher Education Commission, Pakistan, 1 Year 10 Months (01/18 - 10/19).

4. MS (CS), Team Head, National College of Business Administration & Economics, Lahore, Pakistan, 1 Year 10 Months (01/18 - 10/19).
5. Ph.D. (CS), Team Head, Lahore Garrison University, Pakistan, Higher Education Commission, 1 Year 10 Months (01/18 - 10/19), (NOC received).
6. MS (CS), Team Head, Lahore Garrison University, Pakistan, Higher Education Commission, Pakistan, 1 Year (11/19 - 10/20).
7. BS (CS), Team Head, Lahore Garrison University, Pakistan, National Computing Education Accreditation Council, 1 Year (01/16- 12/17). 1 Year 0 Months (11/19 - 10/20).
8. MS (CS), Member, Riphah International University, Lahore Campus, Lahore, Pakistan, Higher Education Commission, Pakistan, 06 Months (11/20 - 04/21).
9. Ph.D. (Computing), Team Head, Riphah International University, Lahore Campus, Lahore, Pakistan, Higher Education Commission, Pakistan, 06 Months (11/20 - 04/21), (NOC received).

c) Research Students Supervised/Trained

Sr. No.	Level	Number of Trainees
1.	Ph.D. Students (Ph.D. Supervision)	11
2.	Master Students (MS/M.Phil. Supervision)	40+
3.	Undergraduate Students (BS/MSC Supervision)	70+

d) Participation in Thesis and Oral Examination Committees

Sr. No.	Level	Number of Examinations
1.	Ph.D. Students	25
2.	Master Students (MS/M.Phil.)	60+
3.	Undergraduate Students (BS/MSC/MSC)	90+

e) Selective List of Supervision

- (Ph.D.) Areej Fatima (Reg. # 2143670), “Smart City Evolution through Data Ingestion Empowered With Machine Learning”.
- (Ph.D.) Syed Saqib Raza Rizvi (Reg. # 2163645), “Optical Character Recognition System for Nastalique Urdu-like Script Languages using Machine Learning”.
- (Ph.D.) Muhammad Asad Ullah (Reg. # 2171666), “Fuzzy Logic Empowered Hybrid

Algorithms for Blind Channel and Data Estimation”.

- (Ph.D.) Syeda Binish Zahra (Reg. # 2163628), “Biomechanical Gait Signature Assessment with Motion Capture System”.
- (Ph.D.) Umer Farooq (Reg. # 2071237), “Knowledge Heterogeneity Analysis & Network Model (Khan) Using Artificial General Intelligence”.
- (Ph.D.) Kashif Iqbal (Reg. # 2173187), “Empowering Transportation System With Multi-sensor Data Fusion Using Machine Learning Techniques”.
- (Ph.D.) Gulzar Ahmad (Reg. # 82181187), “SCOPE: Intelligent Analytical Agent on IoT Cloud for Big Data Management”.
- (Ph.D.) Naila Naz (Reg. # 82181184), “Diagnosis Ovarian Cancer & Prostate Cancer Using Mamdani Fuzzy Inference System (DOC& PC)”, Ph.D. deficiency Thesis.
- (Ph.D.) Muhammad Hussain (Reg. # 82183329), “Analytical Method to Improve the Security Issues of Cloud Computing by using RSA”, Ph.D. deficiency Thesis.
- (Ph.D.) Abdul Hannan Khan (Reg. # 82183417), “Analytical Method to Improve the Security of Internet of Things with Limited Resources”, Ph.D. deficiency Thesis.
- (Ph.D.) Gulzar Ahmad (Reg. # 82181187), “Assessment of Water Quality using HMFIS based Expert System”, Ph.D. deficiency Thesis.
- (Ph.D.) Shahan Yamin Siddiqui (Reg. # 82183418), “Diagnosis Cardiovascular Disease using Adaptive Hierarchical Mamdani Fuzzy Inference System”, Ph.D. deficiency Thesis.
- (M.Phil.) Aaqila Maqbul (Reg. # 2133538), “Complexity Analysis of Controlled Mutant PSO Variants for MC-CDMA system”.
- (MSCS) Usama Ahmed (Reg. # S20C14G05023-22145), “Prediction of Diabetes Empowered with Fused Machine Learning”.
- (MSCS) Tayba Asgher (Reg. # S20C14G05023-21887), “Detection of dengue disease in Pakistan Empowered with Machine Learning”.
- (MSCS) Faiz Rasool (Reg. # S20C14G05023-21866), “Estimation of Virtual Trust on Driverless Cars Using Type-1 Fuzzy Logic”.
- (MSCS) Muhammad Shahzad (Reg. # S20C14G05058-21446), “Long-Term and Short-Term User Preferences Learning for Next POI Recommendation”.
- (MSCS) Muneeb Ali Muzaffar (Reg. # S20C14G05046), “Prediction of Surgical Site Infections Empowered with Fused Computational Techniques”.
- (MSCS) Hafiz Muhammad Saim (Reg. # F20C14G05036), “Cardiovascular Disease Forecast Using Machine Learning and Deep Learning Paradigms.
- (MSCS) Nazish Waqar (Reg. # S21C14G05013), “An Improved and Automated System for Skin Cancer Classification”.
- (MSCS) Nasir Shahzad Yasin (Reg. # F20C14G05042), “Classification of White Blood Cells Empowered with Auto Encoder and CNN”.
- (MSCS) Qurat ul ain Alvi (Reg. # 20701), “Osteoporosis Detection Empowered with Soft Computing”.
- (M.Phil.) Muhammad Saleem (Reg. # 2172039), “Intelligent Occupancy Detection with IoT enabled Sensors empowered by Machine Learning”.
- (M.Phil.) Muhammad Asif (Reg. # 2172063), “Evaluation of Governance Factors of Smart City through Multi-layer Fuzzy Logic (MFL)”.
- (M.Phil.) Abdul Rehman Sakhawat (Reg. # 2172070), “Modeling Simulation and Optimization of Energy Sustainability for the Internet of Things Enabled Smart Cities Empowered with Deep Extreme Learning Machine”.
- (M.Phil.) Ali Sheraz Akram (Reg. # 2181200), “Performance Evaluation of Propagation Factors of Smart City through Hierarchical Mamdani Type-1 Fuzzy Expert System”.
- (M.Phil.) Muhammad Sajid Farooq (Reg. # 2181234), “Urdu Handwritten Signature

Detection by using Machine Learning”.

- (M.Phil.) Hafiz Atta Ur Rahman (Reg. # 2017F-MULMPL-CS-05), “Diagnosis of Arthritis Disease Using Multilayered Mamdani Fuzzy Expert System”.
- (M.Phil.) Ume Tayyaba (Reg. # 2017F- MULMPL-CS-07), “Modeling, Simulation, and Optimization to Diagnose Liver Infection Using Fuzzy Inference System”.
- (M.Phil.) Ayesha Tariq (Reg. # 2018F-MULMPL-CS-02), “Estimating Virtual Trust of Cognitive Social Heterogeneous and Homogeneous Networks Empowered with Hierarchal Socio Using Fuzzy Inference System”.
- (M.Phil.) Gulnaz Safdar (Reg. # 2018F-MULMPL-CS-04), “Smart Identification of Password Strength Using Machine Learning”.
- (M.Phil.) Farzana Bashir (Reg. # 2017F-MULMPL-CS-18), “Diagnosis of Chronic Kidney Disease Expert System using Hierarchal Mumdani Fuzzy Inference System”.
- (M.Phil.) Mujahid Ali (Reg. # 2017F-MULMPL-CS-33), “Diagnosis of Chikungunya Virus Using Mamdani Fuzzy Expert System”.
- (M.Phil.) Anoosha Yameen Khan (Reg. # 2018S-MULMPL-CS-18), “Intelligent Breast Cancer Identification Empowered with Machine Learning Technique”.
- (M.Phil.) Inzmam Ahmad (Reg. # 2018F-MULMPL-CS-19), “Modeling and Simulation Traffic Congestion Control System Using Deep Extreme Machine Learning”.
- (M.Phil.) Muhammad Sajid Farooq (Reg. # 2172197), “Urdu handwritten Signature Detection Using Deep Learning Algorithm”.
- (M.Phil.) Mudasir Hussain (Reg. # SP-2018-MSCS-013), “Power Management in Smart Building using Machine Learning”.
- (M.Phil.) Abid Ali (Reg. # Sp-2018/MSCS/014), “Bone Age Assessment Empowered with Deep Learning: A Survey, Research Challenges, and Future Directions”.
- (BS/MCS/MS) Supervised more than 70 students in different areas of Computer Science and Electronics Engineering.

e) Ph.D. Co-Supervision

- (Ph.D.) Ayesha Atta (Reg. # 2163621), “Smart Traffic Congestion Control System Empowered with Machine Learning”.
- (Ph.D.) Shahan Yamin Siddiqui (Reg. # 82183418), “Cloud And Fusion-Based Intelligent Prediction For Smart Cities: A Smart Health Care Monitoring System Empowered With Ensemble Hierarchal Computational Intelligence Approaches”.
- (Ph.D.) Muhammad Sajid Farooq (Reg. # 2193398), “Blockchain-Based Intrusion Detection Scheme in Heterogeneous Network Empowered with Fused Machine Learning Approaches”.
- (Ph.D.) Tahir Abbas (Reg. # 2201141), “Fused Federated Learning with Deep Extreme Machine Learning based Intelligent System for Disease Prediction in a Smart Health Care5.0”.

f) Training

2. Quality of Education and Training Workshop, Gachon University, South Korea, 1 day (06/21-06/21).
3. How to Improve the Teaching Skills, Lahore Garrison University, Pakistan, 6 days (12/19-12/19).
4. CCNA certified with distinction on CCNI Training from CISCO Regional Academy COMSATS, Islamabad, 15 days (1/07/09-15/07/09).

g) Online Course Certifications (Coursera)

1. Course 1: Support Vector Machine Classification in Python.
2. Course 2: Multiple Linear Regression with sci-kit-learn.
3. Course 3: Linear Regression with Python.
4. Course 4: Mining Quality Prediction Using Machine & Deep Learning.
5. Course 5: Deep Learning NLP: Training GPT-2 from scratch.

5. RESEARCH

a) Selected Research Areas

- Computational Intelligence
- Machine & Deep Learning
- Multi-Carrier and Multi-User Digital Communications
- Channel Estimation & MUD
- Signal and Image Processing
- MIMO Systems
- Smart City (Smart Health, Smart Traffic Control System)

b) Publications/Citations Data

Sr. No	Type of Publication	Number of Publications
1	Total Book Chapters	03
2	Total Journal Articles (Accepted & Published)	160
3	Total IEEE Transactions Articles (Under Review)	04
4	Total Journal Submitted Articles	15
5	Total Conference Articles (Accepted & Published)	50
6	Total Conference Submitted Articles	04
	Total	244
	Total Impact Factor (Published JCR-IF)	640+

Sr. No	Citation Source	Number of Citations	
1	Google Scholar	6600+	
	a) H-Index		48
	b) I-Index		136
2	Scopus	3400+	
	a) H-Index		36
3	Research Gate	5525+	
	a) H-Index		44
	b) Research Interest Score		3,970+
4	Web of Science	1940+	
	a) H-Index		24

c) Participation in Regional & International Conferences

1. The International Conference on Business Analytics for Technology and Security (ICBATS), IEEE, Dubai, UAE, 16-17 Feb 2022.
2. The 7th International Conference on Next Generation Computing 2021, November 4~6, 2021, Jeju, South Korea.

3. The 6th International Conference on Next Generation Computing 2020, November 17~19, 2020, Busan, South Korea.
4. 1st International Conference on Computational Sciences and Technologies, Jamshoro, Pakistan, 10-12 April 2019.
5. 16th International Conference on Statistical Sciences: Advances in Statistics and Data Management: It's Role in National Growth and Socio-Economic Developments, Peshawar, Khyber Pakhtunkhwa, Pakistan, March 05-08, 2018.
6. 2nd International Conference on Computer Science & Allied Technologies, LGU, Lahore, Pakistan, 27-28 Nov. 2019.
7. 3rd IEEE International Conference on Innovative Computing, UMT, Lahore, Pakistan, 1-2 Nov. 2019.
8. 1st National Conference on Computer Science and Information Technology (NCCSIT) Lahore, Pakistan, 3-4 May 2017.
9. 5th National Conference on Computer Science and Information Technology (NCCSIT) Lahore, Pakistan, 24-25 Aug 2021.
10. 2nd IEEE International Conference on Emerging Trends in Engineering, Management, and Sciences (ICTEMS-2016), Peshawar, Pakistan, 28-30 December 2016.
11. 2nd IEEE International Conference on Innovations in Computer Science & Software Engineering (ICONICS'18), Karachi, Pakistan 15-16 December 2018.
12. 1st International Conference on Electrical, Communication, and Computer Engineering (ICECCE-2019), Swat, Pakistan, 24 - 25 July 2019.
13. International Multidisciplinary Research Conference on Global Prosperity through Research & Development (IMRC-2018), Peshawar, Pakistan, October 9th - 11th 2018.
14. 2nd International Conference on Emerging Trends in Engineering, Management, and Sciences (ICTEMS-2016), Lahore, Pakistan.
15. IEEE International Conference on Innovative Computing (ICIC), Lahore, Pakistan, 1-2 Nov 2019.
16. 2nd IEEE International Conference on Computing, Mathematics and Engineering Technologies (iCoMET), Sukkur, Pakistan, 30-31 Jan. 2019.
17. 1st IEEE International Conference on Intelligent Systems Engineering 2016, Islamabad, Pakistan, 15-17 January 2016.
18. 14th International Conference of Statistical Sciences: Statistics for Better Decision-Making and Development, Karachi, Pakistan, 14-16 March 2016.
19. 3rd International Conference on Engineering & Emerging Technologies (ICEET-2016) Conference, Lahore, Pakistan 7-8 April 2016.
20. 2nd National Conference on Emerging Technologies (NCET-2016), USA, Lahore, Pakistan, 6-7 December 2016.
21. 6th IEEE International Conference on Information and Communication Technologies, IBA Karachi, Pakistan, 12-13 December 2015.
22. 4th IEEE conference intelligent systems, modeling, and Simulations (ISMS2013), Bangkok (Thailand), 29-31 Jan. 2013.
23. International Conference on Future Trends in Computing and Communication Technologies (FTCom), Malacca, Malaysia. 13-15 December 2012.
24. Attend the Symposium on My Solar Home at the Hajvery University, Lahore in Feb 2010.
25. Attend the Symposium on Solar Energy at the Hajvery University, Lahore in Dec 2009.

6. SERVICE

a) Membership in Selective Conference Committees

1. SCIENTIFIC COMMITTEE, Reviewer, The International Conference on Business Analytics for Technology and Security (ICBATS), UAE, 16-17 Feb 2022.
2. Keynote Speaker of 5th National Conference on Computer Science and Information Technology (NCCSIT) Lahore, Pakistan, 24-25 Aug 2021.
3. Session Chair, 3rd IEEE International Conference on Innovative Computing, UMT, Lahore, 1-2 Nov. 2019.
4. Session Chair and Keynote Speaker of 2nd International Conference on Computer Science & Allied Technologies, LGU, Lahore, 27-28 Nov. 2019.
5. Co-Chairperson of 16th International Conference on Statistical Sciences: Advances in Statistics and Data Management: It's Role in National Growth and Socio-Economic Developments, Peshawar, Khyber Pakhtunkhwa, Pakistan, March 05-08, 2018.
6. Conference Organizer and Keynote Speaker of 1st National Conference on Computer Science and Information Technology (NCCSIT) Lahore, Pakistan, 3-4 May 2017.
7. Session Chair, NCCSIT 2017, LGU, Lahore, May. 2017.

b) [Service as Reviewer](#)

i) [Journals](#)

1. Ad Hoc Networks, ISSN: 1570-8705, E-ISSN: 1570-8713, ELSEVIER SCIENCE BV, PO BOX 211, AMSTERDAM, NETHERLANDS. **Impact Factor: 3.151.** (11/2018-till date)
2. IEEE Access, ISSN: 2169-3536 (Print) ISSN: 2169-3536 (Online). **Impact Factor: 3.75.** (01/2020-till date)
3. International Journal of Computational Intelligence Systems, ISSN: 1875-6891 (Print) ISSN: 1875-6883 (Online), ATLANTIS PRESS, 29 AVENUE LUMIERE, PARIS, FRANCE, 75019. **Impact Factor: 2.521.** (05/2020-till date)
4. Journal of Intelligent & Fuzzy Systems, ISSN: 1064-1246 (Print) ISSN: 1875-8967 (Online), IOS PRESS, NIEUWE HEMWEG 6B, AMSTERDAM, NETHERLANDS, 1013 BG, **Impact Factor: 1.821.** (03/2020- till date)
5. Computer Applications in Engineering Education ISSN: 1061-3773, E-ISSN: 1099-0542, WILEY, 111 RIVER ST, HOBOKEN, USA, **Impact Factor: 0.694.** (04/2020- till date)
6. International Journal of Advanced Computer Science and Applications (IJACSA), ISSN: 2158-107X (Print), 2156-5570(Online), ENGLAND, **ISI indexed, Q3.** (09/2018 to date).
7. International Journal of Pervasive Computing and Communications (IJPCC), ISSN: 1742-7371, 1742-738X (Online), ENGLAND, **ISI indexed.** (09/2019 to 12/2020).
8. EAI Endorsed Transactions on Scalable Information Systems, ISSN: 2032-9407 (Print), BELGIUM, **ISI indexed.** (07/2020 to date).
9. Sensors MDPI, ISSN: 1424-3210 (print), ISSN: 1424-8220 (online), 2021, ISI indexed **Impact Factor: 3.675, Q1.** (06/2021 to date).
10. Computers, Materials & Continua (CMC), ISSN: 1546-2218 (print), ISSN: 1546-2226 (online), 2021, ISI indexed **Impact Factor: 3.79, Q1.** (01/2021 to date).
11. Intelligent Automation and Soft Computing (IASC), ISSN: 1079-8587, E-ISSN: 2326-005X, 2021, ISI indexed **Impact Factor: 1.647, Q3.** (09/2020 to date).
12. IEEE Access, ISSN: 2169-3536 (Print) ISSN: 2169-3536 (Online), ISI Indexed, **IF= 4.098, Q1.** (10/2019 to date).
13. International Journal of Advanced and Applied Sciences, ISSN: 2313-626X, Taiwan, China, **[ISI Indexed].** (02/2019 to 12/2020).

ii) Conferences

1. **Scientific Committee Member & Session Chair:** The International Conference on Business Analytics for Technology and Security (ICBATS), Dubai, UAE, 16-17 Feb 2022.
2. **Scientific Committee Member:** International Conference On Cyber Resilience, Dubai, UAE, 6-7 Oct 2022.
3. **Invited Keynote Speaker:** First International Conference on Machine Perception and Artificial Intelligence (ICMPAI-2022) IUB, Bahawalpur, Pakistan, 17-18 June 2022.
4. **Scientific Committee Member:** SCDM 2020: The Fourth International Conference on Soft Computing and Data Mining, Putrajaya, Malaysia, 22-23 Jan. 2020.
5. **Reviewer:** The 7th International Conference on Next Generation Computing 2021, Jeju, South Korea, November 4~6, 2021.
6. **Presenter:** The 6th International Conference on Next Generation Computing 2020, Busan, South Korea, November 17~19, 2020.
7. **Session Chair:** 16th International Conference on Statistical Sciences: Advances in Statistics and Data Management: It's Role in National Growth and Socio-Economic Developments, Peshawar, Khyber Pakhtunkhwa, Pakistan, March 05-08, 2018.
8. **TPC:** 2nd International Conference on Computer Science & Allied Technologies, LGU, Lahore, Pakistan, 27-28 Nov. 2019.
9. **Scientific Committee Member & Session Chair:** 3rd IEEE International Conference on Innovative Computing, UMT, Lahore, Pakistan, 1-2 Nov. 2019.
10. **TPC:** 1st National Conference on Computer Science and Information Technology (NCCSIT) Lahore, Pakistan, 3-4 May 2017.
11. **Invited Keynote Speaker:** 4th National Conference on Computer Science and Information Technology (NCCSIT) Lahore, Pakistan, 16-20 Dec 2020.
12. **Invited Keynote Speaker:** 5th National Conference on Computer Science and Information Technology (NCCSIT) Lahore, Pakistan, 24-25 Aug 2021.

c) Membership in Journal Editorial Boards

1. **Guest Editor:** Special Issue: "[Recent Trends and Future Advances in Personalised/Adaptive Ubiquitous Learning](#)" in Computers in Human Behavior, ISSN: 0747-5632, United Kingdom, 2023, ISI indexed **Impact Factor: 9.9, Q1**.
2. **Guest Editor:** Special Issue: "[Machine Learning Empowered Secure Computing for Intelligent Systems](#)" in Computers, Materials & Continua (CMC), ISSN: 1546-2218 (print), ISSN: 1546-2226 (online), 2021, ISI indexed **Impact Factor: 3.79, Q1**.
3. **Guest Editor:** Special Issue: "[Advanced Developments in Machine Learning for Smart System Analysis](#)" in Intelligent Automation and Soft Computing (IASC), ISSN: 1079-8587, E-ISSN: 2326-005X, 2021, ISI indexed **Impact Factor: 1.647, Q2**.
4. **Guest Editor:** Special Issue: "[Machine Learning Empowered Secure Computing for Intelligent Systems](#)" in Computer Systems Science and Engineering (CSSE), ISSN: 0267-6192 (print), 2021, ISI indexed **Impact Factor: 1.486, Q3**.
5. **Guest Editor:** Special Issue: "[Machine Learning-based Intelligent Systems: Theories, Algorithms, and Applications](#)" in Computers, Materials & Continua (CMC), ISSN: 1546-2218 (print), ISSN: 1546-2226 (online), 2020, ISI indexed **Impact Factor: 4.89, Q1**.
6. **Guest Editor:** Special Issue: "[Machine Learning and AI for Medical Data Analysis](#)" in Sensors MDPI, ISSN: 1424-3210 (print), ISSN: 1424-8220 (online), 2021, ISI indexed **Impact Factor: 3.675, Q1**.
7. **Guest Editor:** Special Issue: "[Data Analytics using Machine and Deep Learning for Medical and Biological Sciences](#)" in Intelligent Automation and Soft Computing (IASC), ISSN: 1079-8587, E-ISSN: 2326-005X, 2021, ISI indexed **Impact Factor: 1.647, Q2**.
8. **Guest Editor:** Special Issue: "[Future Communication Networks for Internet of Medical Things \(IoMT\) Based Healthcare 5.0](#)" in Frontiers in Communications & Networks, 2022, ISI indexed.

9. **Guest Editor:** Special Issue: "[Algorithms for Feature Selection](#)" in Algorithms MDPI, ISSN: 1999-4893, 2022, ISI indexed.
10. **Editorial Board Member:** [International Journal of Technology, Innovation, and Management](#), ISSN: 2789-777X, DOI: 10.54489/ijtim, Global Academic Forum on Technology, Innovation and Management, Dubai, UAE.
11. **Editorial Board Member** of Lahore Garrison University Research Journal of Computer Science & Information Technology until January 2018.
12. **Chief Editor:** [International Journal of Computational and Innovative Science](#), ISSN Applied.
13. **Editor:** [iRASD Journal of Computer Science and Information Technology \(JCSIT\)](#), Online ISSN: 2791-0628, Print ISSN: 2791-061X.
14. **Academic Editor:** Computational Intelligence and Neuroscience, ISSN: 1687-5265, London, England, [IF= 3.633, ISI Indexed, Q1].

(d) [Invited Presentations at Scientific Meetings/Workshops](#)

- Applications of Fused Machine Learning in Medical Problems Using MATLAB 2020, NCBA&E, 15th Feb 2021.
- [Alexnet \(CNN\) image classification using MATLAB 2020](#), NCBA&E, 25th April 2021.
- [Simulations of Transfer Learning in Real Life Classification Problems Using MATLAB 2020](#), University of Haripur, LGU, UoL & NCBA&E, Gachon University (Online), 2nd May 2021.
- [How to Simulate LSTM-based Regression Problem using MATLAB 2020](#), University of Haripur, LGU, UoL & NCBA&E, Gachon University (Online), 6th June 2021.
- COVID-19 Detection Mechanism in Ambulances Using Deep Extreme Machine Learning, Impact of COVID-19 on Educational Sectors and to Detect COVID-19 Disease Using Machine Learning, University of Education, Lahore, Pakistan, 25th Nov 2021.
- Applications of Machine Learning, University of Education, Lahore, Pakistan, 25th Nov 2021.
- [Practical Applications of Federated Machine Learning using MATLAB 2021](#), NCBA&E, Lahore, Pakistan, 24th Dec 2021.
- [How to Simulate the Weighted Federated Machine Learning for Medical Problems using MATLAB 2021](#), Gachon University, Republic of Korea, NCBA&E, LGU, Riphah International University, University of Education, Lahore, Pakistan, (Online) 2nd July 2021.
- [How to Write the Mathematical Model of Weighted Federated Machine Learning](#), Gachon University, Republic of Korea, NCBA&E, LGU, Riphah International University, University of Education, Lahore, Pakistan, (Online) 2nd July 2021.
- Applications of Federated Machine Learning, University of Education, Lahore, Pakistan, 15th March 2023.

(e) [University Services](#)

Riphah International University, Lahore Campus, Lahore, Pakistan.

Nov. 2020 to till date (2 Years 08 Months)

Member Board of Faculty of Information & Technology

Membership of Committees and Boards, @ Departmental Level

- Board of Studies
- Academic Review Committee
- Admission Committee for MS (CS)
- Research Ethical Committee

Lahore Garrison University, Lahore, Pakistan

Nov. 2019 to Oct. 2020 (1 Year 0 Months)

In-charge Research Committee @Faculty Level

Member Board of Faculty of Information & Technology

Membership of Committees and Boards, @ Departmental Level

- Board of Studies
- Academic Review Committee
- Admission Committee for MS (CS)

National College of Business Administration & Economics, Lahore, Pakistan.

Jan. 2018 to Oct. 2019 (1 Year 10 Months)

In-charge Research Committee @Faculty Level

Ph.D. & MS Coordinator

Member Board of Faculty of Information & Technology

Membership of Committees and Boards, @ Departmental Level

- Board of Studies
- Academic Review Committee
- Admission Committee for MS (CS) & Ph.D. (CS)

Lahore Garrison University, Lahore, Pakistan

Oct. 2014 to Dec. 2017 (3 Years 04 Months)

In-charge MS Program, In-charge Research Committee @Faculty Level

Member Board of Faculty of Information & Technology

Membership of Committees and Boards, @ Departmental Level

- Board of Studies
- Academic Review Committee
- Admission Committee for MS(CS)
- SAP MOU Committee

Comwave Institute of Science and Technology, Islamabad, DEC Sarhad University.

Sep. 2008 to Sep. 2014 (6 Years 0 Months)

Taught and assisted different IT and EE-related courses

In-charge Research Committee @Departmental Level

Membership of Committees and Boards, @ Departmental Level

- Board of Studies
- Academic Review Committee
- Disciplinary Committee
- Exam Board

(f) Professional/Industry Services

Pakistan Software Export Board, Islamabad, Pakistan.

Aug. 2007 to Sep. 2008 (1 Year 0 Months)

Provided input in different fields of IT, supervising Management Information systems. Additionally, I was liable to look after the LAN/WAN system implementation in the organization.

Combined Military Hospital (CMH), Sargodha, Pakistan.

Oct. 2006 to Aug. 2007 (10 Months)

To the Development of CMH (Combined Military Hospital) Sargodha, Medical Tracking and Management System. The project was operated by using ASP.net (C#) and SQL Server 2005.

(g) Society Services/Memberships

1. Member Advisor, The Punjab Public Service Commission (PPSC), Pakistan, 2018 – 2021.
2. Member of Islamians Engineering Society 2008 – 2011.
3. Member of the Islamian Sports Society 2007 – 2010.
4. Member of the Islamian Blood Society 2007 – 2010.
5. Member of Islamian Basketball Club 2007 - till date.

7. EXTRA CURRICULUM AWARDS & ACHIEVEMENTS

1. Successfully Organized the Basketball Tournament each semester from 2007 – 2010 at the International Islamic University Islamabad.
2. Played as a Basketball University team player from Sept 2007 - Aug 2010.
3. Declared as the Champion in HEC Intervarsity Basketball Tournament ZONE C (Islamabad) in sessions 2008-2009 & 2010-2011.
4. Declared as the Runner-up in the All Punjab Basket-Ball Tournament (Rawalpindi Division) in session 2010-2011.
5. Won Championship in the District High School Zonal Basketball Tournament, District Toba Tek Sigh in 1998-1999.
6. Successfully Organized the Twin City Basketball Tournament (Rawalpindi & Islamabad) in 2014-2016.

8. SKILLS & EXPERTISE

- **Programming Languages:** C, C++, VC++, Assembly language (MASM), LINUX (gedit), MATLAB, Python.
- **Web development:** ASP.NET (C #), HTML, JavaScript, XML.
- **Graphic Tools:** Adobe Photoshop.
- **Databases:** Oracle, MS Access, SQL Server 2005, SQL Server 2019.
- **Operating Systems:** Linux, Windows.

9. LIST OF RESEARCH PUBLICATIONS & SUBMISSIONS

a) Published Books/Book Chapters

1. Chapter #03, Chapter Title: Enhanced Fuzzy Resolution Appliance for Identification of Heart Disease in Teenagers, Book Title: Intelligent Technologies and Applications, eBook ISBN: 978-981-13-6052-7, Softcover ISBN: 978-981-13-6051-0, Series ISSN: 1865-0929, DOI:[10.1007/978-981-13-6052-7_3](https://doi.org/10.1007/978-981-13-6052-7_3), Edition Number:01, Springer Nature Singapore Pte Ltd, 2019.
2. Chapter # 16, Chapter Title: Sensing Time Optimization Using Genetic Algorithm in Cognitive Radio Networks, Book Title: Intelligent Technologies and Applications, eBook ISBN: 978-981-13-6052-7, Softcover ISBN: 978-981-13-6051-0, Series ISSN: 1865-0929, DOI:[10.1007/978-981-13-6052-7_16](https://doi.org/10.1007/978-981-13-6052-7_16), Edition Number:01, Springer Nature Singapore Pte Ltd, 2019.
3. Chapter # 07, Chapter Title: Internet of Things for Green Building Management: A Survey, Book Title: Role of IoT in Green Energy Systems, ISBN13: 9781799867098, ISBN10: 1799867099, EISBN13: 9781799867111, ISBN13 Softcover: 9781799867104, DOI: [10.4018/978-1-7998-6709-8.ch007](https://doi.org/10.4018/978-1-7998-6709-8.ch007), pp. 156-170, IGI Global, January 2021.

b) Selected IEEE Transactions Submissions (*As a Corresponding Author)

4. Muhammad Umar Nasir, Muhammad Zubair, Muhammad Aamer Saleem, **Muhammad Adnan Khan*** and Amir Mosavi “Bellicose Cervical Cancer Prediction Using Weighted Federated Machine Learning Empowered with the Internet of Medical Things and Blockchain Technology”, Under review in **IEEE Transactions on Neural Networks and Learning Systems**, ISSN: 2162-237X, 2022. [IF=14.255, ISI Indexed, Q1].
5. Muhammad Umar Nasir, Shahid Mehmood, Muhammad Zubair, Muhammad Aamer Saleem, Rizwan Ali Naqvi, **Muhammad Adnan Khan*** and Amir Mosavi “Network Intrusion Detection Empowered with Weighted Federated Machine Learning”, Under review in **IEEE Transactions on Network Science and Engineering**, ISSN: 2327-4697, 2022. [IF=5.033, ISI Indexed, Q1].
6. Taher M. Ghazal, Mohammad Kamrul Hasan, Siti Norul Huda Sheikh Abdullah, Khairul Azmi Abu Bakar, Hussam Al Hamadi, Chan Yeob Yeun, Ghassan F. Issa, Sagheer Abbas, Munir Ahmad and **Muhammad Adnan Khan***, “A Federated Learning-Based Smart HealthCare Approach for Disease Prediction”, Under review in **IEEE Transactions on Computers**, ISSN: 0018-9340, 2022. [IF=3.183, ISI Indexed, Q1].

c) Selected Journal Publications (Up-to-date publications list is available on Google Scholar: <https://scholar.google.com/citations?user=h8sHoCwAAAAJ&hl=en>)

7. M. Asif, Sagheer Abbas, **Muhammad Adnan Khan**, Areej Fatima, S.W. Lee, “MapReduce Based Intelligent Model for Intrusion Detection Using Machine Learning Technique ”, Journal of King Saud University-Computer and Information Sciences ISSN: 1319-1578, Elsevier Science BV, PO Box 211, Amsterdam, Netherlands, 1000 AE, DOI: <https://doi.org/10.1016/j.jksuci.2021.12.008>, 2022. [IF= 13.473, ISI Indexed, Q1, Top 1%].
8. Shahan, **Muhammad Adnan Khan**, Sagheer Abbas, Muhammad Farrukh Khan, “Smart Occupancy Detection for Road Traffic Parking using Deep Extreme Learning Machine”, Journal of King Saud University-Computer and Information Sciences ISSN: 1319-1578, Elsevier Science BV, PO Box 211, Amsterdam, Netherlands, 1000 AE, DOI: <https://doi.org/10.1016/j.jksuci.2020.01.016>, vol. 34, no. 03, pp. 727-733, 2022 [IF= 13.473, ISI Indexed, Q1, Top 1%].
9. Allah Ditta, M. Azeem, S. Naseem, K.G. Rana, **Muhammad Adnan Khan**, Zafar Iqbal, “A Secure and Size Efficient Algorithm to Enhance Data Hiding Capacity and Security of Cover Text by Using Unicode”, Journal of King Saud University-Computer and Information Sciences Monthly ISSN: 1319-1578, Elsevier Science BV, PO Box 211, Amsterdam, Netherlands, 1000 AE, DOI. <https://doi.org/10.1016/j.jksuci.2020.07.010>, vol. 34, no. 05, pp. 2180-2191, 2022. [IF=13.473, ISI Indexed, Q1, Top 1%].
10. Ayesha Atta, Sagheer Abbas, **M. Adnan Khan**, Gulzar Ahmed, Umer Farooq, “An Adaptive Approach: Smart Traffic Congestion Control System”, Journal of King Saud University-Computer and Information Sciences Monthly ISSN: 1319-1578, Elsevier Science BV, PO Box 211, Amsterdam, Netherlands, 1000 AE, vol. 23, pp. 1012-1019, 2020, DOI. <https://doi.org/10.1016/j.jksuci.2018.10.011>, PII. S1319-1578(18)30856-5, Reference: JKUCI 531, 2020. [IF=13.473, ISI Indexed, Q1, Top 1%].
11. **Muhammad Adnan Khan**, Sagheer Abbas, Abdur Rehman, Yousaf Saeed, Asim Zeb, M. Irfan Uddin, Nidal Nasser, Asmaa Ali, “A Machine Learning Approach for Blockchain-Based Smart Home Networks Security”, IEEE Network Magazine, ISSN 0890-8044, vol. 35, no. 03, pp. 223-229, 2021, DOI: [10.1109/MNET.011.2000514](https://doi.org/10.1109/MNET.011.2000514). [IF= 10.693, ISI Indexed, Q1, Top 2%].
12. S.Abbas, G.F.Issa, A.Fatima, T.Abbas, T.M.Ghazal, M.Ahmad, C.Y.Yeun, and **Muhammad**

- Adnan Khan**, “Fused Weighted Federated Deep Extreme Machine Learning based Intelligent Lungs Cancer Disease Prediction Model for Healthcare 5.0”, Accepted in International Journal of Intelligent Systems, E-ISSN: 1098-111X, ISSN: 0884-8173, United Kingdom, 2023. [IF= 8.993, ISI Indexed, Q1, Top 14%].
13. Ahsan Ali, **Muhammad Adnan Khan**, and Hoimyung Choi. "Hydrogen Storage Prediction in Dibenzyltoluene as Liquid Organic Hydrogen Carrier Empowered with Weighted Federated Machine Learning." *Mathematics*, vol. 10, no. 20, 2022, pp. 3846. [IF= 2.592, ISI Indexed, Q1, Top 7%].
 14. Shabib Aftab, Sagheer Abbas, T. M. Ghazal, Munir Ahmad, H. A. Hamadi, Chan Yeob Yeun, **Muhammad Adnan Khan**, "A Cloud-based Software Defect Prediction System Using Data and Decision Level Machine Learning Fusion." *Mathematics*, vol. 11, no. 3, 2023, pp. 1-15. [IF= 2.592, ISI Indexed, Q1, Top 7%].
 15. Sahar Arooj, A.Rahman, M.Zubair, M.F.Khan, Khalid, **Muhammad Adnan Khan**, Amir Mosavi, “Breast Cancer Detection and Classification Empowered With Transfer Learning”, *Frontiers in Public Health*, ISSN: 2296-2565, Switzerland, DOI: <https://doi.org/10.3389/fpubh.2022.924432>, vol. 10, pp. 1-18, 2022. [IF=6.461, ISI Indexed, Q1 Top 10%].
 16. Abdur Rahman, Sagheer Abbas, **Muhammad Adnan Khan**, Taher M. Ghazal, Amir Mosavi, “A Secure Healthcare 5.0 System Based on Blockchain Technology Entangled with Federated Learning Technique”, in *Computers In Biology And Medicine*, ISSN: 0010-4825, USA, <https://doi.org/10.1016/j.compbiomed.2022.106019>, 150 (11), 1-12, 2022. [IF=6.698, ISI Indexed, Q1 Top 10%].
 17. Munir Ahmad, Sagheer Abbas, Arrej Fatima, Taher M. Ghazal, M. Alharbi, **Muhammad Adnan Khan** and Nouh Sabri Elmitwally, “AI-Driven livestock identification and insurance management system”, *Egyptian Informatics Journal*, Elsevier, ISSN: 1110:8665, vol. 24, no. 3, pp.1 - 17, 2023. [IF= 5.3, ISI Indexed, Q1].
 18. Nadeem Iqbal, **Muhammad Adnan Khan**, Sang-Woong Lee, “Multi-image cipher based on the random walk of Knight in a virtual 3D chessboard”, *Multimedia Tools and Applications*, vol. 82, no. 15. pp. 1-33, DOI: <https://doi.org/10.1007/s11042-023-15701-6>, 2023. [IF= 2.577, ISI Indexed, Q1].
 19. **Muhammad Adnan Khan**, Shazia Saqib, Tahir Alyas, Anees Ur Rehman, Yousaf Saeed, Asim Zeb, Mahdi Zareei, Ehab Mahmoud Mohamed, “Effective Demand Forecasting Model using Business Intelligence empowered with Machine Learning”, *IEEE Access*, ISSN: 2169-3536 (Print) ISSN: 2169-3536 (Online), vol. 8, issue. 1, pp. 116013-116023, DOI: [10.1109/ACCESS.2020.3003790](https://doi.org/10.1109/ACCESS.2020.3003790), 2020. [IF= 4.098, ISI Indexed, Q1].
 20. **Muhammad Adnan Khan**, Wajhe, Shazia Saqib, Tahir Alyas, Khalid Masood, Mohammed A.A.G, Sultan H. A., “Forecast the influenza pandemic using machine learning”, in *Computers, Materials & Continua (CMC)*, ISSN: 1546-2218 (print), ISSN: 1546-2226 (online), vol. 66, no. 1, pp. 431-440, [doi:10.32604/cmc.2020.012148](https://doi.org/10.32604/cmc.2020.012148), 2020. [IF= 4.89, ISI Indexed, Q1].
 21. **Muhammad Adnan Khan**, Sagheer Abbas, Khalid Masood, Mohammed A.A.G, Abdur Rehman, “Intelligent Forecasting Model of 2019-nCov Noval Coronavirus outbreak Empowered with Deep Extreme Learning Machine”, in *Computers, Materials & Continua (CMC)*, ISSN: 1546-2218 (print), ISSN: 1546-2226 (online), Vol. 64, No.3, pp. 1329-1342, 2020, DOI:[10.32604/cmc.2020.011155](https://doi.org/10.32604/cmc.2020.011155), 2020. [IF= 4.89, ISI Indexed, Q1].
 22. **Muhammad Adnan Khan**, Muhammad Umair, Muhammad Aamer Saleem, “GA based adaptive receiver for MC-CDMA system”, *Turkish Journal of Electrical Engineering & Computer Sciences*, Turkey, ISSN 1300-0632 & E-ISSN 1303-6203, Vol 23, Issue No. Sup.1, P. 2267-2277, 2015, DOI: [10.3906/elk-1303-202](https://doi.org/10.3906/elk-1303-202). [IF=0.625, ISI Indexed, Q3].
 23. **Muhammad Adnan Khan**, Abdur Rehman, Khalid Masood, Mohammed A.A.G, Sultan H. A., “Enhance Intrusion Detection in Computer Networks based on Deep Extreme Learning Machine”, in *Computers, Materials & Continua (CMC)*, ISSN: 1546-2218 (print), ISSN:

- 1546-2226 (online), vol. 66, no. 1, pp. 467- 480, [doi:10.32604/cmc.2020.013121](https://doi.org/10.32604/cmc.2020.013121) 2020. [IF= 4.89, ISI Indexed, Q1].
24. **Muhammad Adnan Khan**, Muhammad Umair, Muhammad Aamer Saleem, M. Nadeem Ali, Sagheer Abbas, “CDE Using Improved Opposite based Swarm Optimization for MIMO Systems”, Journal of Intelligent & Fuzzy Systems, ISSN: 1064-1246 (Print) ISSN: 1875-8967 (Online), IOS Press, Nieuwe Hemweg 6b, Amsterdam, Netherlands, 1013 BG, DOI: [10.3233/JIFS-181127](https://doi.org/10.3233/JIFS-181127), vol. 37, no. 1, pp. 687-692, 2019. [IF=1.821, ISI Indexed, Q1].
 25. **Muhammad Adnan Khan**, Mubashar Habib, Shazia Saqib, Tahir Alyas, Khalid Masood, Mohammed A.A.G., Sultan H.A., “Analysis of the smart player’s impact on the success of a team empowered with machine learning”, Computers, Materials & Continua (CMC), ISSN: 1546-2218 (print), ISSN: 1546-2226 (online), vol. 66, no. 1, pp. 691-706, [doi:10.32604/cmc.2020.012542](https://doi.org/10.32604/cmc.2020.012542), 2020. [IF= 4.89, ISI Indexed, Q1].
 26. **Muhammad Adnan Khan**, Taher M.G, Abdur Rehman, Sang-Woong Lee, “Data Fusion-Based Machine Learning Architecture for Intrusion Detection”, Computers, Materials & Continua (CMC), ISSN: 1546-2218 (print), ISSN: 1546-2226 (online), vol. 70, no. 2, pp. 3399- 3413, [doi:10.32604/cmc.2022.020173](https://doi.org/10.32604/cmc.2022.020173), 2021. [IF= 3.79, ISI Indexed, Q2].
 27. **Muhammad Adnan Khan**, Asma Kanwal, Sagheer Abbas, Faheem Khan, T. Whangbo, “Intelligent Model for Predicting the Quality of Services Violation”, Computers, Materials & Continua (CMC), ISSN: 1546-2218 (print), ISSN: 1546-2226 (online), vol. 71, no. 2, pp. 3607-3619, 2022. [IF= 3.79, ISI Indexed, Q2].
 28. **Muhammad Adnan Khan**, Sagheer Abbas, Ali Raza, Faheem Khan, T. Whangbo, “Emotion Based Signal Enhancement Through Multisensory Integration Using Machine Learning”, Computers, Materials & Continua (CMC), ISSN: 1546-2218 (print), ISSN: 1546-2226 (online), vol. 71, no. 3, pp. 5911-5931, 2022. [IF= 3.79, ISI Indexed, Q2].
 29. **Muhammad Adnan Khan**, Sagheer Abbas, Ayesha Atta, Allah Ditta, Hani A., Muhammad Farhan Khan, Atta-ur-Rahman, and Rizwan Ali Naqvi, “Intelligent Cloud-Based Heart Disease Prediction System Empowered with Supervised Machine Learning”, Computers, Materials & Continua (CMC), ISSN: 1546-2218 (print), ISSN: 1546-2226 (online), vol: 65, no: 01, pp.139-151, [doi:10.32604/cmc.2020.011416](https://doi.org/10.32604/cmc.2020.011416), 2020. [IF= 4.89, ISI Indexed, Q1].
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