

Curriculum Vitae of Dr. Muhammad Adeel



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Objective

To serve the academic and research community by continuously enhancing my expertise and actively contributing to interdisciplinary advancements in Artificial Intelligence, Agent-Based Reinforcement Learning, and Complex Adaptive Systems. I aim to lead innovative research projects, develop cutting-edge curriculum, and foster collaborative global initiatives in emerging areas such as Biomedical Modeling, Human-Robot Interaction, Swarm Intelligence, and Smart Systems. My goal is to bridge theoretical foundations with real-world applications, ensuring impactful outcomes for both academia and society.

Personal Bio-Data

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 Father's name: Sheikh Muhammad Saeed
 Date of Birth: 15-03-1979
 Nationality: Pakistani
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Summary

Sex: **Male**, Age: **46**, Status: **Married**, Highest Degree: **PhD in Computer Science**
 Teaching and Research Experience: **18 years**
 Pioneer and inauguration of the department at NTU: **Department of Computer Science**
 Pioneer, the developed scheme of studies and led accreditation of the degree programs: **Bachelor of Science (BS) in Artificial Intelligence (AI), BS Computer Science (CS), BS Software Engineering (SE), BS Information Technology (IT), and PhD in CS**
 Number of International Travel Grants Awarded by HEC: **3**
 Number of Different Taught Courses at University Level: **35**
 Number of New Courses Developed/Modified: **33**
 Current Position: **Lecturer in the Department of Computer Science**
 Current Employer: **National Textile University, Faisalabad, Pakistan**
 Editor-in-Chief: **Journal of Advancement in Computing (JAC) from Feb 2024 to Feb 2025**
 Number of Journal and Conference Publications: **20**
 Under Review Projects/Papers: **4**, Impact Factor of Journal Publications: **25.036**
 Number of Final Year BS Projects (FYP) Supervised: **27**, Number of FYPs Co-supervised: **27**
 Number of Certificates: **10**, Number of Awards/Appreciation Letters: **9**
 Number of Memberships in Committees: **22**, Number of Professional Trainings/Workshops: **9**
 Number of BS Semester Projects Supervised: **65**, Number of Developed Projects: **7**

Educational Qualifications

Name	Qualification	Specialization	Institution	From-To	Division/CGPA
Doctorate	PhD in Computer Science	Agent-based Reinforcement Learning for Complex and Self Adaptive Systems	National Textile University, Faisalabad-Pakistan	27-10-2014 18-02-2020	3.50 out of 4.0
Masters (18-years)	MS in Computer Science	Software Design Patterns	Government College University, Faisalabad-Pakistan	08-06-2009 05-05-2011	3.42 out of 4.0
Graduation (16-years)	M.Sc. in Information Technology	Online Application Systems	Quaid-i-Azam University, Islamabad	26-09-2005 21-07-2007	1 st

Teaching (Total Experience: 18 years)

Sr. No.	Employer with address	Designation	From	End	Job Responsibilities	Employment
1	National Textile University, 37610 Sheikhpura Road, Faisalabad, Pakistan	Lecturer in Computer Science	27-10-2023	Present	Teaching and administrative responsibilities	Full-time
2	Riphah International University, Satyana Road, Faisalabad, Pakistan	Associate Professor in Computing	24-02-2024	23-06-2024	Teaching, research, and administrative responsibilities	Full-time Taking sabbatical leave from NTU
2	National Textile University (NTU), 37610 Sheikhpura Road, Faisalabad Pakistan	Assistant Professor in Computer Science	27-10-2020	26-10-2023	Teaching, research, and administrative responsibilities	Full-time
4	National Textile University, Faisalabad, Pakistan	Lecturer in Computer Science	25-03-2008	26-10-2020	Teaching and administrative responsibilities	Full-time

Industrial Experience (2 Years as Freelancer)

1. Web Development Using Bootstrap, JavaScript, MySQL, and PHP
2. Web Development Bootstrap, JavaScript, and Java Server Pages
3. Desktop Application Development Using Oracle, and Java NetBeans

Certifications and Trainings

Qualification	Institute	Year	Subject
Certificate of Successfully Completion	Government of Pakistan, Ministry of Education and Training in collaboration with Establishment Division, Pakistan Management & Planning Institute, H-8/1, Islamabad Pakistan.	2025	4-day training workshop on unlocking the potential of Artificial Intelligence (AI) for public sector excellence in Pakistan (14-17th April, 2025)
Certificate of Participation	Pakistan Scientific and Technological Information Centre And National Textile University, Faisalabad-Pakistan	2023	Two Days Training Workshop on AI (Artificial Intelligence) and Skills for Freelance
Certificate for Token of Thanks on Conducting Training as Resource Person	Pakistan Water and Power Development Authority (WAPDA) Engineering Academy Faisalabad, conducted at WAPDA Engineering Academy, Faisalabad-Pakistan.	2023	Training-Workshop on “Ethics and Behaviour Change” to the Faisalabad Electricity Supply Company’s employees regarding 5th Office Automation Management Course
Certificate of Completion	Institute of Arabic Language, Islamabad	2020	2 nd . Level of Muallim-ul-Qur’an Course
Certificate of Completion	Institute of Arabic Language, Islamabad	2020	1 st . Level of Muallim-ul-Qur’an Course
Certificate of Participation	Research Center for Training & Development (Through High Definition Video Conferencing at National Textile University, Faisalabad)	2017	Research and Inferential Statistics- Capacity Building in Inferential Statistics and Analysis
Certificate of Achievement	National Textile University, Faisalabad with Pakistan Engineering Council	2017	Hands-On Campus Workshop on Design and Deploy Embedded Systems using LabVIEW
Certificate of Achievement	Big Data University IBM®	2015	Big Data Fundamentals

Certificate of Achievement	Big Data University IBM®	2015	Hadoop Fundamentals I
Certificate	Alamanah Foundation®, Islamabad	2014	Training on Strategic Time Management
Certificate of Attendance	HEC & Microsoft® Innovation Centre-Pakistan	2011	Technical Training on Windows Phone 7 Development
Certificate	The Rehman College Faisalabad	2004	Applied English Language

List of New Courses Developed / Modified

BS: Bachelor of Science, MS: Master of Science, PhD: Doctor of Philosophy, AI: Artificial Intelligence, ML: Machine Learning, SE: Software Engineering, CS: Computer Science

Sr. No.	Course Title	Theory / Lab	For Degree Program	Year Developed / Modified
1	Machine Learning	Theory and Lab	BSAI	2025
2	Agent-Based Reinforcement Learning for Complex Adaptive Systems (Healthcare Systems)	Theory and Lab	MS, PhD in CS with specialization in AI and BSAI	2025, to be offered for coming semester
3	Programming for Artificial Intelligence	Theory and Lab	BSAI	2025, to be offered for coming semester
4	Introduction to Artificial Intelligence	Theory and Lab	BSAI	2025
5	Data Science	Theory and Lab implementing AI and ML through Python	BSIT	2023
6	Agent-based Modeling and Simulation	Theory and Lab using AI and Machine Learning	MSSE, BSSE	2025, 2023
7	Formal Method in Software Engineering	Theory	BSSE	2025
8	Advanced Software Requirement Engineering	Theory	MSSE	2025
9	Software Requirement Engineering	Theory and Lab	BSAI, BSSE	2025
10	Software Testing and Quality Assurance	Theory and Lab	MSSE	2024
11	Software Engineering	Theory and Lab	BSAI, BSSE	2023

12	Problem Solving	Theory and Lab implementing C++	BSAI, BSCS, BSSE,	2021
13	Software Construction and Management	Theory and Lab	BSSE	2019
14	Software Verification and Validation	Theory and Lab	BSSE	2019
15	Theory of Programming Languages	Theory	MSCS	2019
16	Data Structures and Algorithms	Theory and Lab implementing C++	BSCS	2018
17	Advanced Theory of Computation	Theory	MSCS	2017
18	Object Oriented Analysis and Design	Theory	BSCS	2016
19	Advanced Software Engineering	Theory	MSSE	2015
20	Advanced Operating System	Theory	MSCS	2014
21	Internet Programming	Theory and Lab implementing PHP	BSCS	2014
22	Advanced Web Engineering	Theory and Lab implementing, Bootstrap, JavaScript, PHP	BSCS	2013
23	Object Oriented Programming	Theory and Lab implementing Java	BSCS, BSSE	2012
24	Quran Translation-I	Theory	PhD CS, MSCS, MSSE, BSAI, BSCS, BSIT, BSSE	2021, 2023, 2025
25	Quran Translation-II	Theory	PhD CS, MSCS, MSSE, BSAI, BSCS, BSIT, BSSE	2021, 2023, 2025
26	Quran Translation-III	Theory	BSAI, BSCS, BSIT, BSSE	2021, 2023, 2025
27	Quran Translation-IV	Theory	BSAI, BSCS, BSIT, BSSE	2021, 2023, 2025
28	Quran Translation-V	Theory	BSAI, BSCS, BSIT, BSSE	2021, 2023, 2025
29	Quran Translation-VI	Theory	BSAI, BSCS, BSIT, BSSE	2021, 2023, 2025

30	Quran Translation-VII	Theory	BSAI, BSCS, BSIT, BSSE	2021, 2023, 2025
31	Quran Translation-VIII	Theory	BSAI, BSCS, BSIT, BSSE	2021, 2023, 2025
32	English for International English Language Testing System (IELTS)	Theory and Lab		2004, 2016, 2024
33	English as Foreign Language	Theory and Lab		2004, 2016, 2024

Taught Courses in 18 Years of Teaching Experience

1. Machine Learning
2. Data Science
3. Advanced Software Requirement Engineering
4. Management Information System
5. Agent-based Modeling and Simulation (using AI and Machine Learning)
6. Software Testing and Quality Assurance
7. Formal Method in Software Engineering
8. Software Construction and Management
9. Software Requirement Engineering
10. Software Verification and Validation
11. Software Requirement Engineering
12. Advanced Analysis of Algorithm
13. Advanced Software Engineering
14. Advanced Theory of Computation
15. Advanced Operating System
16. Software Engineering Fundamentals
17. Database Systems
18. Problem Solving Using C++
19. Object Oriented Programming
20. Object Oriented Analysis and Design
21. Data Structures and Algorithms
22. Internet Programming
23. Advanced Web Engineering

24. E-Commerce
25. Digital Logic and Design
26. Discrete Mathematics and Structures
27. IELTS
28. English as Foreign Language
29. Quran Translation-I
30. Quran Translation-II
31. Quran Translation-III
32. Quran Translation-IV
33. Quran Translation-V
34. Quran Translation-VI
35. Quran Translation-VII
36. Quran Translation-VIII

Courses and Thesis Title in PhD

1. Agent-based Modeling and Simulation (Artificial Intelligence + SE)
2. Machine Learning
3. Advanced Research Methods
4. Research Seminars
5. Advanced Data Analytics
6. Bioinformatics

Thesis Title: “Modeling and Computer Simulation of Mammary Gland Tumor Cells Aggression Level for Evaluating the Efficacy and Toxicity of Anticancer Drugs”

Research Background and Areas of Interest

With a strong foundation in Artificial Intelligence, Machine Learning, and agent-based simulation, my research focuses on the modeling, simulation, and intelligent adaptation of complex systems. My PhD research centered on **agent-based modeling of chemotherapy drug interactions and tumor behavior**, highlighting the simulation of **complex adaptive biological systems** using rule-based agent interactions and computational experiments. This work reflects early and innovative application of **agent-based techniques** to real-world biomedical challenges, laying a solid conceptual and methodological foundation for further research in **Agent-Based Reinforcement Learning (ABRL)**.

Over the years, my contributions have evolved across interdisciplinary domains:

- **Agent-Based Modeling & Simulation (ABMS):** Developed multiple simulation models (SMTCAL, SMG1SE, SMG2SE) to study drug efficacy and toxicity using NetLogo,

incorporating dynamic interaction rules among autonomous agents—aligning directly with ABRL principles where agents interact with and learn from complex environments.

- **Artificial Intelligence & Machine Learning:** Applied machine learning to areas like drone surveillance, software incident prediction, and stress estimation for sustainable healthcare. These contributions demonstrate my interest in **learning-based systems**, predictive modeling, and intelligent decision-making, which form the core of reinforcement learning strategies.
- **Robotics & Autonomous Systems:** Explored intelligent ground robot systems for search-and-rescue operations, showcasing interest in **multi-agent robotic collaboration**, a key ABRL research frontier.
- **Complex and Self-Adaptive Systems:** My modeling work in oncology demonstrates deep engagement with **non-linear, adaptive systems**—both biological (tumor cells, drug metabolism) and computational (agent interactions, simulation-driven learning).

Through my work as corresponding author in multiple high-impact publications, including those in **biomedical informatics**, **energy systems**, and **intelligent automation**, I have consistently explored the intersection of **data-driven decision-making**, **adaptive agent behavior**, and **simulation-based exploration**—core themes in **Agent-Based Reinforcement Learning for Complex and Self-Adaptive Systems**.

Current Research Interests

- Agent-Based Reinforcement Learning (ABRL)
- Multi-Agent Systems and Distributed AI
- Complex Adaptive Systems Simulation in Health and Robotics
- Machine Learning for Smart and Resilient Systems
- AI in Biomedical and Social System Modeling
- Swarm Intelligence and Robotics Collaboration

Research and Publications

1. **Muhammad Adeel (corresponding author)**, Muhammad Khalid, Abdel Halim Harrath, Lassaad Mchiri, Lamjed Mansour, “Quantifying Anticancer Drug Toxicity on White Blood Cell Count in Cancer Patients: A Mathematical and Computational Approach”, Journal of King Saud University - Science, 2024, 103024, ISSN 1018-3647, <https://doi.org/10.1016/j.jksus.2023.103024>. (Impact Factor = 3.8)
2. Nawazish S, Ullah A, Hassan J, Khan SH, Aziz A, Din RU, **Adeel M**. Studying the Invasion of Drones in Indigenous Areas Using Machine Learning Techniques. UCP Journal of Engineering & Information Technology (**HEC Recognized-Y Category**). 2023;1(2):17-23. <https://ojs.ucp.edu.pk/index.php/ucpjeit/article/view/230>
3. Akhtar S, **Adeel M (corresponding author)**, Iqbal M, Namoun A, Tufail A, and Kim K “Deep learning methods utilization in electric power systems”, Energy Reports Volume 10, 2023,

Pages 2138-2151, ISSN 2352-4847, <https://doi.org/10.1016/j.egyr.2023.09.028>. (**Impact Factor = 5.2**)

4. **Muhammad Adeel**, Zahid Mehmood, Amin Ullah, "Stress Estimation Model for the Sustainable Health of Cancer Patients", Computational and Mathematical Methods in Medicine, vol. 2022, Article ID 3336644, 11 pages, 2022. <https://doi.org/10.1155/2022/3336644> (**Impact Factor = 2.8**)
5. Sikandar Ali, **Muhammad Adeel (corresponding author)**, Sumaira Johar, Muhammad Zeeshan, Samad Baseer, Azeem Irshad, "Classification and Prediction of Software Incidents Using Machine Learning Techniques", Security and Communication Networks, vol. 2021, Article ID 9609823, 16 pages, 2021. <https://doi.org/10.1155/2021/9609823> (**Impact Factor = 1.968**)
6. **Adeel M**, Asif M, Faisal MN, Ahmad S and Majeed W, 2019. Computer simulation modeling for analyzing mammary gland tumor cells aggression level restricted by comparative chemotherapy using docetaxel and doxorubicin both with cyclophosphamide. Pak Vet J, 39(3): 416-422. http://www.pvj.com.pk/pdf-files/39_3/416-422.pdf (**Impact Factor = 5.4**)
7. **Adeel M**, Asif M, Faisal MN, Chaudary MH, Malik MS, Khalid M. Comparative study of adjuvant chemotherapeutic efficacy of docetaxel plus cyclophosphamide and doxorubicin plus cyclophosphamide in female breast cancer. Cancer management and research. 2019; 11:727. <https://doi.org/10.2147/CMAR.S180802> (**Impact Factor = 2.886**)
8. **Adeel, M.**, Khalid, M., Asif, M. and Faisal, M.N., 2019. Simulation Models for Comparison of Toxicities of Anticancer Drugs. Annals of Punjab Medical College (APMC), 13(3), pp.216-222. <http://apmcfmu.com/index.php/apmc/article/view/691> (**HEC: Y Category**)
9. Khalid, M. and **Adeel, M.**, 2019. Role of Palliative Radiotherapy in Advanced Tumors; A Single Institutional Experience. Annals of Punjab Medical College (APMC), 13(3), pp.206-208. <http://apmcfmu.com/index.php/apmc/article/view/692> (**HEC: Y Category**)
10. Ahmad, S., Asif, M., Talib, R., **Adeel, M.**, Yasir, M. "Surveillance of Intensity Level and Geographical Spreading of Dengue Outbreak among Males and Females in Punjab, Pakistan: A Case Study of 2011", J Infect Public Health. 2018 Jul - Aug;11(4):472-485. [doi: 10.1016/j.jiph.2017.10.002](https://doi.org/10.1016/j.jiph.2017.10.002). Epub 2017 Nov 2, with (**Impact Factor = 4**)
11. Shahbaz Ahmad, Muhammad Asif, Muhammad Majid, Manaza Iqbal, **Muhammad Adeel**, "An Effective Study Of Geographical Pattern And Intensity Of Dengue Outbreak

Among Males In Punjab, Pakistan", LIFE: International Journal of Health and life-Sciences, Vol. 3, No. 3, (2018), pp.3 [DOI: https://doi.org/10.20319/ijhls.2018.33.117137](https://doi.org/10.20319/ijhls.2018.33.117137)

12. **Muhammad Adeel (corresponding author)**, Sheeza Noor, and Muhammad Khalid, "Agent-based Modeling and Simulation for Visualization of Tumor Cells Aggression Level During Chemotherapy" in the proceedings of ICES-2023, International Conference and Exhibition for Science, College of Science, King Saud University, Riyadh, Saudi Arabia, Feb 2023, p-827
13. N. Farooq, U. Ilyas, **M. Adeel** and S. Jabbar, "Ground **Robot** for Alive Human Detection in Rescue Operations," *2018 International Conference on Intelligent Informatics and Biomedical Sciences (ICIIBMS)*, Bangkok, 2018, pp. 116-123, doi: 10.1109/ICIIBMS.2018.8550003
14. Shahbaz Ahmad, Muhammad Asif, Shahzad Sarfraz, Manazza Iqbal, **Muhammad Adeel**, Muhammad Asad Javed, Muhammad Wasim, "Geographical and metrological analysis of Dengue outbreak among Females for detection of hotspots in Punjab, Pakistan", The Asian Conference on Remote Sensing (ACRS), Venue: Kulamlumpur Malaysia, (2018)
15. **Adeel M**, Asif M, Faisal MN, Ahmad U and Ahmad S. "Simulation Model-Based Tutorial for Tumor Growth and its Resistance Against Chemotherapy". In the proceedings of 3rd ICHLSR Bangkok - International Conference on Healthcare & Life-Science Research, 25-26 Nov 2017, Bangkok, Thailand KU Home, Kasetsart University, Chatuchak, Bangkok, Thailand. [2017-BKK-nov-ICHLSR-PROCEEDINGS.pdf](#)
16. **Adeel, M.**, Ahmad, U., Asif H. M. and Asif, M. (May, 2015) "Role of Agent Based Modeling and Simulation for Administration of Cancer Treatment" in the proceedings of 3rd Annual Computational Conference, Institute of Space Technology, Islamabad Pakistan
17. Bilal, M. and **Adeel, M.** (2014), "Innovative Business Value for Survival and Improving Quality of Educational Information System", in the proceedings of 1st International Young Engineers Convention (FEIIC IYEC-2014), April 18-19, 2014, University of Engineering and Technology, Lahore Pakistan
18. Khalid, F. and **Adeel, M.** (2014), "Technological and Leadership Support towards Collaborative Software Development" in the proceedings of FEIIC 1st International Young Engineers Convention (FEIIC IYEC-2014)
19. **Adeel, M.** and Asif, N. (2011, August), "*GFCDPK: An Approach for Identification of Composite Design Pattern from Source Code of Java Based Implemented Systems*". In the proceedings of 2nd ICSEMA, International Conference on Software Engineering Management and Applications, Zurich, Switzerland.

Potential Research Projects and Articles Under Review

Sr No	Title	(Project/Article)	Institute/Journal	Date of Submission	Status
1	AI-Powered Precision Chemotherapy: Optimizing Drug Dosage for Enhanced Cancer Treatment Outcomes	Research project	Prince Sultan University, Riyadh Saudi Arabia	28-01-2025	Under review
2	Enhancing Dental Caries Identification with Deep Learning: A Study of Convolutional Neural Networks and Transfer Learning Approaches	Research article	JMIR Medical Informatics (JMI) impact factor 3.1	25-03-2025	Under revision
3	Weather-Resilient Cotton Cultivation: A Machine Learning Framework for Early Pest Detection and Management	Research article	Energy Nexus impact factor 8.1	27-10-2024	Under review

4	Smart Passport Service: Integrating AI into Public Service Delivery	Research project	Establishment Division, Pakistan Management & Planning Institute, H-8/1, Islamabad Pakistan.	17-05-2025	Under review
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Courses in Undergraduate Degree Program (16-Years of Education)

1. Mathematical Methods
2. Introduction to Linear Networks
3. Introduction to Computer Programming
4. Computer Systems
5. Discrete Mathematics
6. Nonlinear Electronics
7. Computer Architecture
8. Introduction to Software Engineering
9. Data Structure and Algorithms
10. Database Systems
11. Computer Architecture
12. Discrete Time Signal and Systems
13. Microcontroller and Interfacing
14. Object Oriented Programming
15. Operating Systems
16. Information Theory
17. Digital Communication Systems
18. Computer Networks
19. Software Engineering
20. IT Project Management
21. Network Security and Management

Project title: Online Examination System using Java Server Pages

Courses in Graduate Degree Program (18-Years of Education)

1. Advance Analytics of Algorithm
2. Advance Operating Systems
3. Advance Software Engineering
4. Software Quality Assurance
5. Software Tools and Process
6. Software Design and Architecture

7. Data Ware Housing
8. Theory Of Computation
9. Advance Computer Architecture
10. Data Analysis
11. Topics in Software Engineering

Thesis Title (MS in Computer Science):

Identification of Design Patterns from Source Code of Java Based Implemented System

Professional Training /Seminars/Workshops

- 1) Conducted training workshop (2024), “How to understand The Quran-e-Majeed without Grammar” at National Textile University, Faisalabad Pakistan.
- 2) Conducted two days teachers’ training workshop (May 10-11, 2019) on, “How to be Fluent in Speaking English Like a Native Speaker?” at Dare-Arqam School, Satyana Road Faisalabad Pakistan.
- 3) Conducted training workshop (Feb 25, 2018) on, “How to find a research gap for MS/PhD research?” at Bin Saeed Training Institute and Research Centre, Faisalabad Pakistan.
- 4) Conducted hands on training (December 17, 2014) on “Simulation Model-Based Tutorial for Tumor Growth and its Resistance Against Chemotherapy” at National Textile University, Faisalabad Pakistan.
- 5) Conducted workshop (March 21, 2013), on the Development of Mobile Application on Android at Department of Computer Science in National Textile University, Faisalabad-Pakistan.
- 6) Conducted 2nd Seminar on English as Foreign Language, July 16, 2012, Institute of Computer Studies and Languages, Faisalabad, Pakistan (Bin Seed Training Institute and Research Centre).
- 7) Conducted 1st Seminar on English as Foreign Language, February 07, 2011, Institute of Computer Studies and Languages, Faisalabad, Pakistan.

Awards and Letters of Appreciation

- 1) **Winning Project Proposal Award** for the successful development and presentation of the project titled “*Smart Passport Service: Integrating Artificial Intelligence into Public Service Delivery*”, awarded by the Government of Pakistan, Ministry of Education and Training, in collaboration with the Establishment Division. The award was presented at the Pakistan Management & Planning Institute, Islamabad, during a 4-day training workshop on *Unlocking the Potential of Artificial Intelligence (AI) for Public Sector Excellence in Pakistan* (April 14–17, 2025).
- 2) **Letter of Appreciation** awarded by the Rector, National Textile University (NTU), in recognition of excellent performance in teaching the *Quran Translation-I* course, received on February 24, 2022.
- 3) **Letter of Research Collaboration and Appreciation** for the successful completion of collaborative PhD research integrating Modeling and Simulation (Agent-Based Reinforcement Learning) techniques in the oncology domain. This letter was awarded by the Head of the

Clinical Oncology Department, Faisalabad Medical University / Allied Hospital Faisalabad, and received on March 15, 2019.

- 4) **Letter of Valuable Research Contribution** awarded by the Administrative Registrar, Clinical Oncology Department, Faisalabad Medical University / Allied Hospital Faisalabad, in recognition of research in oncology involving the implementation of Agent-Based Reinforcement Learning for Complex Adaptive Systems (Modeling and Computer Simulation), received on March 15, 2019.
- 5) **Letter of Appreciation** awarded by the Chairman, Department of Computer Science (DCS), NTU, for successfully organizing and conducting a *Technical Workshop on Java Programming* for DCS students, received in March 2018.
- 6) **Letter of Appreciation** awarded by the Chairman, DCS-NTU, for successfully completing a challenging assignment (delegated by the former Chairman, DCS) involving the compilation of a comprehensive accreditation file of nearly 5,000 pages in May 2012. This was a requirement for the accreditation of the BSCS program by the Higher Education Commission (HEC), National Computing Education Accreditation Council (NCEAC), Pakistan. As a result, DCS-NTU was awarded the prestigious *W-Category*.
- 7) **Words of Appreciation and Special Recognition** awarded by the Chairman, DCS-NTU, for successfully undertaking a special assignment related to the inauguration of the PhD Computer Science program, received on March 21, 2014.
- 8) **Letter of Appreciation** for excellent performance in teaching undergraduate courses, awarded by the Chairman, DCS-NTU, on May 30, 2013, based on instructions from HEC, Islamabad.
- 9) **Award of Excellence** for Best English Speaker, presented during the Independence Day of Pakistan celebration held on August 12, 2004. This award was conferred by the Chairman, Department of Applied English Language, Rehman College, Faisalabad, Pakistan.

Distinct Services Provided for the Employers

- 1) Inauguration of BSCS program and Department of Computer Science in 2009 at NTU
- 2) Launching Visual Basic for Application programming tool as the substitute of C programming language used to be taught to All B.Sc. Textile Engineering programs, in Computer Programming course.
- 3) Designing of Scheme of Studies for this BSCS program in 2009
- 4) Organization of Courses' Contents of this program in 2009
- 5) Administration and completion of all requirements for accreditation of BSCS program with Higher Education Commission, National Computing Education Accreditation Council (NCEAC), in 2012
- 6) Organization of awards celebration for position holders in semester projects competition in 2013

- 7) Designing of Scheme of Studies (2014) for PhD in CS program at CS Department, National Textile University, Faisalabad Pakistan.
- 8) Designing of Scheme of Studies (2021) for BS Artificial Intelligence program at CS Department, National Textile University, Faisalabad Pakistan.
- 9) Designing of Scheme of Studies for PhD in CS program in 2014.
- 10) Head of Accreditation Team (2024) of BS Artificial Intelligence program at Riphah International University, Faisalabad Campus with Higher Education Commission, NCEAC.
- 11) Head of New Programs (2024) at College of Computing at Riphah International University, Faisalabad Campus.
- 12) Editor-in-Chief (Feb 2024 to Feb 2025) Journal of Advancement in Computing (JAC), an official journal of College of Computing at Riphah International University, Faisalabad Campus.

Responsibilities and Membership in Committees

- 1) Member of Self-Assessment Review Committee PhD in CS Program (2025)
- 2) In-charge, new programs in the College of Computing at Riphah International University, Faisalabad Campus
- 3) Convener IT Society, NTU
- 4) Class Advisor, BSIT-7th of DCS
- 5) Coordinator, Sports, DCS
- 6) Coordinator, SOS, Quran Translation Committee, NTU
- 7) Member, Occupational Health and Safety Committee, SOS
- 8) Member, Faculty Research Board, DCS
- 9) Member, Departmental Board of Studies, DCS
- 10) Member, Alumni Committee, DCS
- 11) Member, Departmental Disciplinary Committee, DCS

- 12) Subject Expert / Member, Self-Assessment Team from QEC for SAR of Master of Science Program Offered at DCS
- 13) Subject Expert / Member, Self-Assessment Team from QEC for SAR of PhD Program Offered at DCS
- 14) Member, Software Engineering Committee for Course Specification Revision of Spring Semester Courses, DCS
- 15) Member (on the behalf of Chairman DCS), Ehsaas Institutional Scholarship Award Committee for Interview Phase-III For Year 2021-22
- 16) Member, BSSE FYP Committee, DCS, NTU
- 17) Responsible, Committee 5 for Mid Evaluation of FYP, 2017-2021, DCS, NTU
- 18) Internal Examiner, Committee 8, Final Evaluation of FYP, 2017-2021, DCS, NTU
- 19) Responsible, Committee 5, Mid Evaluation of FYP, 2018-2022, DCS
- 20) Internal Examiner, Committee 8, Final Evaluation of FYP, 2018-2022, DCS
- 21) Evaluator, for the Evaluation of FYP of BSIT 7th Semester, 2019-2023, DCS
- 22) Evaluator / Internal Examiner, for the Internal Evaluation of FYP of BSIT 8th Semester, 2019-2023, DCS

Thesis Evaluation as External Examiner

- 1) Evaluator and external examiner of MS (CS) final thesis with title, “Simulation Based Performance Comparison of Congestion Control Algorithms” at GC University, Faisalabad, in 2012
- 2) Evaluator and external examiner of MS (CS) final thesis with title, “Usability Evaluation Matrixes for Content Based Management Systems” at GC University, Faisalabad, in 2012

MS Thesis in Supervised

- 1) Muhammad Amir Irshad, 2023-NTU-MSSE-FL-0013, “Resource-Optimized Embedded Architecture for Automatic AI Based Control in Melt Spinning Process”, December 17, 2025

- 2) Sameer Javed, 2023-NTU-MSSE-FL-016, “Enhancing Software Usability with AI Techniques through User-Centric Requirement Engineering Approach”, December 17, 2025

MS Thesis Co-supervised

- 3) Nida Sarwar, 17-NTU-4146, 2021, “Classification of Life-Threatening Features of Malignant Mesothelioma Using Apriori Algorithm”
- 4) Sunbal Nawaz, 19-NTU-MSCS-4026, 2021, “Prioritisation of Nonfunctional Requirements in E-commerce”

BSCS Final Year Supervised Projects

Sr. No	Title	Session
1	Web Based Haj Umrah Guide	2010-2014
2	Mathematics Web Based Application	2010-2014
3	Wage System for Stitching Operators	2010-2014
4	Student Assessment System	2011-2015
5	Vehicle Service Provider	2011-2015
6	Spinning Production Record	2011-2015
7	Online Auction and Bidding System	2011-2015
8	NTU Online Recruitment System	2011-2015
9	Online Catering System	2011-2015
10	Multi-Disciplinary Press (Web Solution)	2015-2019
11	Task Reminder (Android App)	2015-2019
12	NTU Complaint Portal	2016-2020
13	Web Solution for Alhamad Traders	2016-2020
14	Poultry Marketing (Web Based)	2016-2020
15	Admission Counseling System	2017-2021
16	Real Estate Management System (Web-Based)	2017-2021
17	Facial Recognition Based Attendance System	2017-2021
18	Oncology Repository System of Allied Hospital Faisalabad	2017-2021
19	Price Comparison System	2018-2022
20	Faculty, Staff and Student Connector (Android App)	2018-2022
21	Diet Recommendation System	2021-2025
22	Re-Fashion Hub	2021-2025
23	AI-Driven Textile Dashboard with Inspection & Market Insights	2021-2025
24	TaskIntel: AI-Powered Intelligent System for Real-World Task Handling	2022-2026
25	University Complaint Management System	2022-2026
26	SkillShift: LMS linking structured learning with career readiness	2022-2026

References

Sr. No	Name	Designation	Institute and Address	Contact
1	Prof. Dr. Muhammad Tahir Hussain	Professor Dean School of Science	National Textile University, 37610 Sheikhupura Road, Faisalabad-Pakistan	mtahirhussain@ntu.edu.pk +92 300 6650656
2	Dr. Zulfiqar Ahmad Rehan	Associate Professor Department of Chemistry	Sultan Qaboos University, Al-Khod, Sultanate of Oman	z.rehan@squ.edu.om (+ 968) 2414 1401 Ext: 2470