



Afzal Badshah, PhD

(Assistant Professor)

Department of Software Engineering, University of Sargodha, Sargodha, Pakistan

Email: afzalbadshahkhattak@gmail.com; afzal.badshah@uos.edu.pk;

Phone: +923006091064

Website: afzalbadshah.com

YouTube: youtube.com/c/afzalbadshahmanduri (Urdu)

youtube.com/@PDwithDrAfzal (Eng)

ORCID: <https://orcid.org/0000-0002-3444-4609>

Dr. Afzal Badshah is an academic and researcher with a focus on Computer Science, specializing in Cloud Computing, Edge Computing, Internet of Things, Networks, Offloading and AI Integration to them. As an Assistant Professor at the University of Sargodha, he imparts his knowledge to aspiring professionals. A certified Expert Trainer by the British Council, Microsoft and QAED, Dr. Badshah has mentored thousands of educators on Pedagogy skills, Leadership and 21st-century learning methodologies. His research, published in reputable journals, contributes significantly to the field. Collaborating with international experts, he expands the frontiers of knowledge in his domain.

Personal Information

Nationality: Pakistani

Domicile: Mianwali, Punjab, Pakistan

Academic Qualification

- | | |
|-------------|--|
| 2021 | PhD (Computer Science) From International Islamic University, Islamabad |
| 2014 | MS (Computer Science) From the University of Lahore (Islamabad Campus) |
| 2010 | Master of Science (Information Technology) from the University of Sargodha |
| 2008 | Bachelor of Science from the University of Punjab. Major: Computer Science, Math, Physics |
| 2005 | Intermediate from BISE Sargodha. Major: Computer Science, Math, Physics |
| 2003 | Matric from BISE Sargodha Major: Physics, Mathematics, and Biology |

Professional Qualification

- | | |
|-------------|--|
| 2013 | B.Ed from Sarhad University
Peshawar |
| 2018 | M.Ed from Allama Iqbal Open University |
| 2019 | Teacher Knowledge Test (TKT) from Cambridge University, UK. |

Courses Taught

Course contents and presentations are available on afzalbadshah.com

Cloud Computing, Parallel and Distributed Computing, Research Methodology, Data Communication, Computer Networks, Object Oriented Programming, Introduction to Network Design and Analysis, Database Management System, Software Engineering

Funded Project

Project Title	Institution	Project Number	Role	Year
Social Big Data Management through Collaborative Mobile, Regional, and Cloud Computing	Taif University, Saudi Arabia	TU-DSPP-2024-67	PI	2024
Emerging Technologies in Emergency Management	NCEMA, Rabdan Academy, UAE	RES0079	Research Associate	2024
Regional Computing for Healthcare Big Data	University of Jeddah	UJ-24-DR-446-1	Co-PI	2024
Smart Cities Big Data: Performance and Cost Optimization with Regional Computing	King Saud University	RSP2024R458	PI	2024

Working Experience

2024 – Date

Has been working as an **Assistant Professor (BPS-19)** at the Department of Software Engineering, University of Sargodha, Pakistan.

2024- Date

Working as an **Academic Editor** with PLOS One Journal

2023-2024

Research Associate (Remote) with Rabdan Academy, Abu Dhabi, United Arab Emirates.

2023 – 2024

Served as an Assistant Professor at the Department of Computing, Hamdard University, Islamabad.

2021- 2023

Served as **Lead Trainer** with **Microsoft** and **QAED Punjab** to train teachers and administrators for 21st Century Digital Skills. [On requirements basis]

2017– 2020

Served as Expert Trainer with the British Council and QAED Punjab to train the teachers of the School Education Department, Punjab, Pakistan.

2016- 2023

Served as **acting Cluster Training and Support Center head (BPS-18)** since April 2016 and organised hundreds of training for teachers and conducted attached school examinations

2014-2017

Served as a **Cloud Computing Instructor and Research Supervisor** for MSCS Students at Chenab College Mianwali (On Visiting)

2012- 2023

Served as a **Master Trainer** with the **Directorate of Staff Development Punjab** for teachers' development since 2012. [On requirements basis]

2009 – 2023

Served as a **Secondary School Teacher BPS -17 / Acting Principal (BPS-18)** at the School Education Department, Punjab, Pakistan since October 2009.

● Academic Activities

1. **Convener of Program Accreditation Committee (PAC)**, Department of Computing, Hamdard University
2. **Convener** of QEC Committee, University of Hamdard
3. **Member** of **OBE** Committee

● Achievements

1. **Microsoft Innovative Educator (MIE)** Expert for the year 2021-2022
2. Received a **Good Manager Certificate** from the district education authority
3. Selected by the British Council for the **Cambridge University TKT** (Teacher Knowledge Test) course

Training received (British Council, Microsoft & QAED)

1. **Two-Day Workshop on AI in Higher Education** at the UVAS, Lahore, 2025
2. **One-Day Workshop on AI Tools in Research** at the University of Sargodha, 2025
3. **One Day Workshop on Outcome-Based Learning (OBE)** at the University of Sargodha, 2025
4. **3 Days Training on Faculty Professional Development** at the University of Sargodha, 2024
5. **1 Day Training on Reflective Teaching** at Hamdard University, Islamabad Campus, 2024
6. **1 Day Training of Prompt Engineering** at Hamdard University, Islamabad Campus, 2024
7. **1 Day Training on Outcome Based Learning (OBE)** at Hamdard University, Islamabad Campus, 2023
8. **8 Days Training as Lead Trainer on 21st Century Digital Skills at QAED Lahore by Microsoft** 2021
9. **2 Days Training on Single National Curriculum** by QAED, June 2021
10. **12 Days Training of Expert Trainers on pronunciation** at QAED Faisalabad under **British Council** and **QAED Lahore**, Punjab (February 2020)
11. **8 Days Training on leadership development at QAED Mianwali** under QAED Lahore, Punjab (November & December 2019)
12. **10 Days preparation course for Teacher Knowledge Test (TKT)** by Cambridge University, UK under British Council and QAED Lahore, Punjab (January 2019)

13. **10 Days Training of Expert Trainers on pedagogical skills and assessment** at QAED Faisalabad under British Council and QAED Lahore, Punjab (November 2019)
14. **5 Days of Professional Development training of Expert Trainer** at QAED Faisalabad under the British Council and QAED Lahore, Punjab (April 2019)
15. **10 Days training on Punjab Education and English Language Initiative (PEELI)** at QAED Faisalabad under British Council and QAED Lahore, Punjab (August 2018)
16. **10 Days IT refresher course** by DSD, Punjab, Pakistan (December 2010)

Training delivered (British Council, Microsoft & QAED)

Trained thousands of teachers under hundreds of training sessions of 3 days, 5 days and one-month workshops for

- Induction training
- Pedagogy
- Assessment
- Administration
- Leadership and classroom management
- Single National Curriculum
- 21st Century Learning Design

International Publications

Total Impact Factor:	135
Total Journal Publication (W):	28
Total Journal Publication (X, Y):	03
Total Conferences Publication:	05
Total Books:	01
Total Patents:	01 [applied]

The detailed list is attached.

Conference and Seminars

1. Chaired 1st International Conference on Science for Future Trends at the University of Lahore, Sargodha Campus
2. Delivered a keynote address at the 1st International Conference on Science for Future Trends at the University of Lahore, Sargodha Campus

Courses & Certificates (Physical)

2021	Microsoft Innovative Educator (MIE) Expert Selected by the Microsoft for the year of 2021 and 2022
2021	Microsoft 21st Century Learning Design (21st CLD)
2017	English Expert Trainer Certificate by British Council (Achieved after getting 45 days of training and training thousands of teachers from 2017 to 2020)

2015	Leader Ship Development Training by Brtisich Council and DSD Lahore
2012	Cisco Certified Network Associate from Corvit Institute Rawalpindi
2012	Linux Training from Corvit Institute Rawalpindi
2010	IT Refresher Course DSD Lahore

Courses & Certificates (MOOCs)

2024	Prompt Engineering for Everyone from IBM
2023	Introduction to Big Data with Spark and Hadoop from Coursera
2023	Migration to the AWS Cloud from Coursera
2021	Microsoft Education Certificates (07 Certificates; including Microsoft Forms, Transform Learning with Microsoft Team, Office 363 and Windows, Microsoft OneNote, and Windows 10 for Education)
2021	Scientific Paper Review certificate from Publons Academy
2019	Academic writing for University from University of Reader, UK, under British Council.
2018	Understanding Language from the University of Southampton, UK, under the British Council
2018	English in Early Childhood from the University of Southampton, the UK under the British Council

Profiles

Website:	afzalbadshah.com
ORCID:	https://orcid.org/0000-0002-3444-4609
Medium:	afzalbadshah.medium.com
YouTube:	youtube.com/c/afzalbadshahmanduri

References

Dr. Anwar Ghani (PhD Supervisor)
 International Islamic University, Islamabad, Pakistan
anwar.ghani@iiu.edu.pk;
 Phone: +92-3338043818

Professor Dr. Ali Daud (Mentor)
 Faculty of Resilience, Rabdan Academy, Abu Dhabi, United Arab Emirates
 Email: adaud@ra.ac.ae , alimsdb@gmail.com
 Phone: +92-3317110050

Languages

English, Urdu, Pashto (native) and Sariki

Publications by Dr. Afzal Badshah (Cumulative IF: 140)

Sr. #	Authors Name	Title of Publication	No	Voume #	Page #	Year	Journal of Publication	Impact Factor	ISSN / ISBN	HEC Journal Category	Link
							Cumulative IF	139.65			
1	Afzal Badshah	A Multi-Tier Architecture with Regional Computing for UAVs' Big Data Offloading				2025	Frontiers in Computer Science	2.4	2624-9898	W	https://www.frontiersin.org/journals/computer-science/articles/10.3389/fcomp .
2	Afzal Badshah , Ali Daud	Optimizing Healthcare Big Data Performance through Regional Computing				2025	Scientific Reports	3.8	2045-2322	W	https://www.nature.com/articles/s41598-025-87515-5
3	Afzal Badshah	Regional Computing for Vehicular Big Data				2025	IEEE Access	3.4		W	Accepted for publication
4	Afzal Badshah	Regional Computing for Educational Big Data	15			2025	Scientific Reports	3.8	2045-2322	W	https://www.nature.com/articles/s41598-025-92120-7
5	Afzal Badshah , Ali Daud	Social big data management through collaborative mobile, regional, and cloud computing				2025	PeerJ Computer Science	3.09	2376-5992	W	https://peerj.com/articles/cs-2689/
6	Afzal Badshah	Emerging Technologies for Emergency Mangaement System				2025	PeerJ Computer Science	3.09	2376-5992	W	Production
7	Afzal Badshah	Emergency Management Tools: Applications, Limitations and Future Prospects				2025	IEEE Open Journal For Computer Socity	5.7	2169-3536	W	https://ieeexplore.ieee.org/document/10974680
8	Afzal Badshah , Ali Daud	Applications of Big Data: Challenges and future	290	57	1-49	2024	ArtificialIntelligence Review	10.7	1573-7462	W	https://link.springer.com/article/10.1007/s10462-024-10938-5
9	Naveed Ur Rehman, Afzal Badshah	Visual Deepfake Detection: Review of Techniques, Tools, Limitations, and Future Prospects		13	1-45	2024	IEEE Access	3.4	1573-7462	W	https://ieeexplore.ieee.org/document/10816641
10	Afzal Badshah , Ali Daud	Smart Cities Big Data: Performance and Cost Optimization with Regional Computing		12		2024	IEEE Access	3.4	2169-3536	W	https://ieeexplore.ieee.org/document/10670400
11	Afzal Badshah	Optimizing the Over and Underutilization of Network Resources During Peak and Off Hours		12	82549 - 82559	2024	IEEE Access	3.4	2169-3536	W	https://ieeexplore.ieee.org/document/10534057
12	Madeeha Aman, Ghani Ur Rehman and Afzal Badshah	Cost Analysis of IPv6 Distributed Mobility Management Protocols in Comparison with TFMIPv6	19	8	1-24	2024	PLOS One	3.7	1932-6203	W	https://doi.org/10.1371/journal .

Publications by Dr. Afzal Badshah (Cumulative IF: 140)

Sr. #	Authors Name	Title of Publication	No	Voume #	Page #	Year	Journal of Publication	Impact Factor	ISSN / ISBN	HEC Journal Category	Link
							Cumulative IF	139.65			
13	Ghani Ur Rehman, Afzal Badshah	Reliable Community Card System for Detecting and Isolating Selfish Vehicles in SCC-Based VDTN'	35	6		2024	Transactions on Emerging Telecommunications Technologies	3.6	2161-3915	X	10.22541/au.171944990.07183634/v1
14	Afzal Badshah , Ateeqa Jalal, Anwar Ghani and Ali Daud	Towards Smart Education through Internet of Things: A Survey	2	56	1-39	2023	ACM Computing Surveys	23.8	0360-0300	W	https://dl.acm.org/doi/10.1145/3610401
15	Afzal Badshah, Anwar Ghani, Ghani-Ur-Rehman	Transforming Educational Institutions: Harnessing the Power of Internet of Things, Cloud, and Fog Computing	15	11	44946	2023	Future Internet	3.4	1999-5903	W	https://www.mdpi.com/1999-5903/15/11/367
16	Afzal Badshah , Anwar Ghani, and Ali Daud	Orchestrating model to improve utilization of IaaS environment for sustainable revenue		57	1-17	2023	Energy Technologies and Assessment	8	2213-1388	W	https://doi.org/10.1016/j.seta.2023.103228
17	Mahmood, Z.; Cheng, B.; Butt, N.A.; Rehman, G.U.; Zubair, M.; Badshah, A	Efficient Scheduling of Home Energy Management Controller (HEMC) Using Heuristic Optimization Techniques	2	15	1-22	2023	Sustainability	3.9	2071-1050	W	https://doi.org/10.3390/su15021378
18	Ghani-Ur-Rehman and Afzal Badshah ,	EMS: An Efficient Selfish Nodes Monitoring System in IoT-based Vehicular Delay Tolerant Network	1	23	1-20	2022	Sensor	4.3	1424-8220	W	https://doi.org/10.3390/s23010099
19	Zafar Mehmood, Ghani-Ur-Rehman, Afzal Badshah	Generation of Controlled Synthetic Samples and Impact of Parameters	16	12	8371	2022	Applied Sciences	4.35	2076-3417	W	https://doi.org/10.3390/app12168371
20	Afzal Badshah , Ateeqa Jalal	Use of Regional Computing for Social Big Data to Minimize the Big Data Effects		171	1-9	2022	Computers & Industrial Engineering	7.9	1879-0550	W	https://doi.org/10.1016/j.cie.2022.108433
21	Afzal Badshah , Anwar Ghani and Ali Daud "	Comprehensive survey on revenue maximization: Research challenges and approaches	7	33	4492	2022	Transactions on Emerging Telecommunications Technologies, Willey	3.6	2161-3915	W	https://doi.org/10.1002/ett.4492
22	Afzal Badshah , Ateeqa Jalal, Umar Farooq, and Ghani-Ur-Rehman	SLA-MaaS: Service Level Agreement monitoring through Monitoring as a Service	5	11		2022	Big Data	4.6	2167-6461	W	http://doi.org/10.1089/big.2021.0274
23	Afzal Badshah , Ateeqa Jalal and Ghani Ur Rehman	Academic use of Social Media in Learners' Engagement in Underdeveloped Countries' Schools	5	26	6319-6336	2021	Education and Information Technologies	5.5	1360-2357	W	http://dx.doi.org/10.1007/s10639-021-10619-8
24	Muhammad Asif, Muhammad Abid, Afzal Badshah	Stackelberg Game for Heterogeneous Traffics Management in Next-Generation Cellular Network	13	15	1733-1746	2021	IET Communication	1.7	1751-8636	W	https://doi.org/10.1049/cmu2.12185

Publications by Dr. Afzal Badshah (Cumulative IF: 140)

Sr. #	Authors Name	Title of Publication	No	Voume #	Page #	Year	Journal of Publication	Impact Factor	ISSN / ISBN	HEC Journal Category	Link
							Cumulative IF	139.65			
25	Afzal Badshah, Anwar Ghani, Azeem Irshad, Husnain Naqvi and Saru Kumari	Smart Resources Allocation on External Cloud Service Providers (CSPs) to Minimize Delay, Running Time and Transfer Cost	3	34	4686	2021	International Journal of Communication Systems (IJCS)	1.34	1099-1131	W	https://doi.org/10.1002/dac.4686
26	Afzal Badshah, Anwar Ghani, Giuseppe Aceto, Antonio Pescap'e, and Shahab Shamshirband	Performance based Service Level Agreement in cloud computing to maximize providers' revenue	7	14	1102-1112	2020	IET-Communication	1.77	1751-8636	W	https://doi.org/10.1049/iet-com.2019.0855
27	Anwar Ghani, Afzal Badshah, Saeedullah Jan, and Ali Daud	Issue and challenges in Cloud Storage Architecture: A Survey	1	1	1-12	2020	Researchpedia Journal of Computing (RpJC)		2790-6817		https://researchpedia.info/wp-content/uploads/2021/12/RpJC_2020_6-Issues-and-Challenges-in-Cloud-Storage-Architecture-A-Survey.pdf
28	Afzal Badshah, Anwar Ghani, Shahaboddin Shamshirband and Anthony Theodore Chronopoulos	Optimizing IaaS Provider Revenue through Customer Satisfaction and Efficient Resource Provisioning in Cloud Computing	18	13	2913-2922	2019	IET -Communication	1.77	1751-8636	W	https://doi.org/10.1049/iet-com.2019.0554
29	Afzal Badshah, Anwar Ghani, Ahsan Qureshi and Shahaboddin Shamshirband	Smart Security Framework for Educational Institutions using the Internet of Things (IoT) Computers	1	61	81-101	2019	Materials & Continua (CMC),	3.24	1546-2226	W	https://doi.org/10.32604/cmc.2019.06288
30	Afzal Badshah, Ateeqa Jalal, and Tauseef Ur Rehman	Performance-based Service Level Agreement in Cloud Computing	1	4	20-30	2015	Research Journal of Science and IT	3.5	2551-1553		
31	Afzal Badshah, Ateeqa Jalal, and Tauseef Ur Rehman	SLA based Infrastructure resource allocation in Cloud Computing to increase IaaS revenue	1	4	1-13	2015	Research Journal of Science and IT	3.5	2551-1553		
	Conferences										
1	Afzal Badshah	The Future of Smart Roads: Technology, Challenges and Potential					International Conference on Emerging Technologies in Electronics Computing				https://ieeexplore.ieee.org/abstract/document/11071111

Publications by Dr. Afzal Badshah (Cumulative IF: 140)

Sr. #	Authors Name	Title of Publication	No	Voume #	Page #	Year	Journal of Publication	Impact Factor	ISSN / ISBN	HEC Journal Category	Link
							Cumulative IF	139.65			
2	Kainat, Afzal Badshah	Artificial Intelligence in the Metaverse: Transforming Health in Smart Cities					International Conference on Emerging Technologies in Electronics Computing				https://ieeexplore.ieee.org/abstract/document/11070256
3	Aysha, Afzal Badshah	Virtual Reality Ethics: Understanding the Behavioral and Wellbeing Consequences of Virtual Experiences					International Conference on Emerging Technologies in Electronics Computing				https://ieeexplore.ieee.org/abstract/document/11070283
5	Afzal Badshah , Ateeqa Jalal, and Mustafa M. Nasralla	Smart Education in Smart Cities: Challenges And Solution			1-8	2023	9th IEEE International Smart Cities Conference 2023, Bucharest, Romania				10.1109/ISC257844.2023.10293615
----- Books -----											
1	Afzal Badshah	I Wish Every Parent Knew This: Parents, Children & School			148	2023	Amazon Publication		979-8854810487		https://www.amazon.com/dp/B0CDNMBQJ
2	Afzal Badshah	کاش والدین یہ جانتے ہوتے: بچ، مکتب اور والدین					With Editor				