

Farooque Azam

Professor

College of Electrical & Mechanical Engineering

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About

Dr. Farooque Azam is working as Professor in the College of Electrical & Mechanical Engineering. Dr. Farooque Azam has a PhD in Software. Dr. Farooque Azam has published 124 research articles & conference papers having a citation count of 1026, carried out 2 projects and filed 0 intellectual property.

Qualifications

PhD in Software Beijing University of Aeronautics and Astronautics , China	2003 - 2007
MS in Software NUST, Islamabad , Pakistan	1999 - 2000
BE in Electrical NED UET Karachi , Pakistan	1982 - 1987

Experience

Professor College of Electrical & Mechanical Engineering	2021- Present
Adjunct Faculty College of Electrical & Mechanical Engineering	2019 - 2019
Adjunct Faculty College of Electrical & Mechanical Engineering	2017 - 2019
Defence Faculty College of Electrical & Mechanical Engineering	2007 - 2017
Instructor CI B PMA , PMA	2000 - 2003
Maj 56 EME Bn , Sailkot	1996 - 1998

Awards

TI (M)	2011
President Gold Medal President Gold Medal on getting first position (SGPA=3.94) in MS (Software Engineering) in 2000 from MCS.	2001

Professional Memberships

PEC	Since 1987
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Research Projects

National Projects

A Model-driven Framework for simultaneously supporting Multiple Representations of Embedded System Designs to improve Productivity (MRED)	2022
Funding Agency: HEC	
Amount: PKR 20,383,000.00	
Status: Approved_inprocess	
Establishment of Software Engineering Lab	2008
Funding Agency: HEC	
Amount: PKR 800,000.00	
Status: Completed	

International Projects

Research Articles

Exploring the Effectiveness and Trends of Domain-Specific Model Driven Engineering: A Systematic Literature Review (SLR)	2024
<i>Amina Zafar Farooque Azam Afshan Latif Aon Safdar Muhammad Waseem Anwar</i>	
<i>IEEE Access</i> , Volume 12, Pages 86809-86830	
Impact Factor: 3.400 Quartile: 2 Citations: 4	
DOI: 10.1109/ACCESS.2024.3414503	
A Retargetable Model-Driven Framework for the Development of Mobile User Interfaces	2022
<i>Mehreen Khan Farooque Azam Fatima Samea Muhammad Waseem Anwar Muhammad Rashid Abdul Wahab Muzaffar Wasi Haider Butt</i>	
<i>Journal of Circuits Systems and Computers</i> , Volume 31, No. 1, Article Number 2250018 (30 pages)	
Impact Factor: 1.278 Quartile: 4 Citations: 4	
DOI: 10.1142/S0218126622500189	
An Integrated Machine Learning Framework for Effective Prediction of Cardiovascular Diseases	2021
<i>Farooque Azam Yawar Rasheed Muhammad Abdul Rahim Aqsa Rahim Muhammad Waseem Anwar Abdul Wahab Muzaffar</i>	
<i>IEEE Access</i> , Volume 9, Pages 106575-106588	
Impact Factor: 3.476 Quartile: 2 Citations: 132	
DOI: 10.1109/access.2021.3098688	
A Systematic Review on the Data Interoperability of Application Layer Protocols in Industrial IoT	2021
<i>Farooque Azam Anam Amjad Muhammad Waseem Anwar Wasi Haider Butt</i>	
<i>IEEE Access</i> , Volume 9, Pages 96528-96545	
Impact Factor: 3.476 Quartile: 2 Citations: 49	
DOI: 10.1109/access.2021.3094763	
Reverse Engineering of Object Oriented Systems to ALF	2021
<i>Asad Nawaz Tauseef Ahmad Rana Farooque Azam Muhammad Waseem Anwar</i>	
<i>International Journal of Software Engineering and Knowledge Engineering</i> , Volume 31, No. 5, Pages 745-775	
Impact Factor: 1.007 Quartile: 4	
DOI: DOI: 10.1142/S0218194021500200	
Recent Trends in Underwater Wireless Sensor Networks (UWSNs) – A Systematic Literature Review	2020
<i>Farooque Azam Ayesha Tariq Muhammad Waseem Anwar Tayyba Zahoor Abdul Wahab Muzaffar</i>	
<i>Programming and Computer Software</i> , Volume 46, No. 8, Pages 699-711	
Impact Factor: 0.936 Quartile: 4 Citations: 14	
DOI: https://doi.org/10.1134/S0361768820080228	
Multi-objective regression test suite optimization using three variants of adaptive neuro fuzzy inference system	2020
<i>Ayesha Kiran Wasi Haider Butt Arsalan Shaukat Muhammad Umar Farooq Urooj Fatima Farooque Azam Zeeshan Anwar</i>	
<i>PloS One</i> , Volume 15(12), Article Number e0242708	
Impact Factor: 3.240 Quartile: 2 Citations: 9	
DOI: https://doi.org/10.1371/journal.pone.0242708	
A Model-Driven Alarms Framework (MAF) With Mobile Clients Support for Wide-Ranging Industrial Control Systems	2020

<p><i>Farooque Azam Muhammad Waseem Anwar Muhammad Nouman Zafar Abdul Wahab Muzaffar Wasi Haider Butt Hanny Tufail</i> <i>IEEE Access</i> , Volume 8, Pages 174279-174304</p> <p>Impact Factor: 3.367 Quartile: 2 Citations: 3</p> <p>DOI: Digital Object Identifier 10.1109/ACCESS.2020.3025933</p>		
<p>A model-driven framework for data-driven applications in serverless cloud computing</p> <p><i>Fatima Samea Farooque Azam Muhammad Rashid Muhammad Waseem Anwar Wasi Haider Butt Abdul Wahab Muzaffar</i> <i>PLoS ONE</i> , Volume 15(8), Article Number e0237317</p> <p>Impact Factor: 3.240 Quartile: 2 Citations: 21</p> <p>DOI: https://doi.org/10.1371/journal.pone.0237317</p>		2020
<p>A Unified Model-Based Framework for the Simplified Execution of Static and Dynamic Assertion-Based Verification</p> <p><i>Muhammad Waseem Anwar Muhammad Rashid Farooque Azam Aamer Naeem Muhammad Kashif Wasi Haider Butt</i> <i>IEEE Access</i> , Volume 8, Pages 104407-104431</p> <p>Impact Factor: 3.367 Quartile: 2 Citations: 37</p> <p>DOI: 10.1109/ACCESS.2020.2999544</p>		2020
<p>A model-driven mobile HMI framework (MMHF) for industrial control systems</p> <p><i>Iqra Qasim MUHAMMAD WASEEM ANWAR Farooque Azam Hanny Tufail Wasi Haider Butt Muhammad Noman Zafar</i> <i>IEEE Access</i> , Volume 8, Pages 10827-10846</p> <p>Impact Factor: 3.367 Quartile: 2 Citations: 25</p> <p>DOI: 10.1109/ACCESS.2020.2965259</p>		2020
<p>A Novel Framework to Automatically Generate IFML Models From Plain Text Requirements</p> <p><i>Wasi Haider Butt Maryum Hamdani Muhammad Waseem Anwar Imran Ahsan Farooque Azam Mudassar Adeel Ahmed</i> <i>IEEE Access</i> , Volume 7, Pages 183489-183513</p> <p>Impact Factor: 3.745 Quartile: 1 Citations: 4</p> <p>DOI: 10.1109/ACCESS.2019.2959813</p>		2019
<p>A model-driven framework for design and verification of embedded systems through SystemVerilog</p> <p><i>Muhammad Waseem Anwar Muhammad Rashid Farooque Azam Muhammad Kashif Wasi Haider Butt</i> <i>Design Automation for Embedded Systems</i> , Volume 23. Issue 3-4. Pages 179-223</p> <p>Impact Factor: 2.767 Quartile: 1 Citations: 52</p> <p>DOI: 10.1007/s10617-019-09229-y</p>		2019
<p>A Model Driven Reverse Engineering Framework for Generating High Level UML Models From Java Source Code</p> <p><i>UMAIR SABIR FAROOQUE AZAM SAMI UL HAQ MUHAMMAD WASEEM ANWAR WASI HAIDER BUTT ANAM AMJAD</i> <i>IEEE Access</i> , Volume 7 Pages 158931-158950</p> <p>Impact Factor: 3.745 Quartile: 1 Citations: 28</p> <p>DOI: 10.1109/ACCESS.2019.2950884</p>		2019
<p>The Influence of Nitrogen Absorption on Microstructure, Properties and Cytotoxicity Assessment of 316L Stainless Steel Alloy Reinforced with Boron and Niobium</p> <p><i>Sadaqat Ali Ahmad Majdi Abdul Rani Riaz Ahmad Mufti Farooq I. Azam Sri Hastuty Zeeshan Baig Murid Hussain Nasir Shehzad</i> <i>Processes</i> , Volume 7 ,Issue 8, Article Number 506</p> <p>Impact Factor: 2.753 Quartile: 2 Citations: 14</p> <p>DOI: 10.3390/pr7080506</p>		2019
<p>A Novel Framework to Automatically Generate Executable Web Services from BPMN Models</p> <p><i>Iqra Zafar Muhammad Waseem Anwar Bilal Maqbool Farooque Azam Wasi Haider Butt Aiman Nazir</i> <i>IEEE ACCESS</i> , Volume 7, Pages 93653-93677</p> <p>Impact Factor: 3.745 Quartile: 1 Citations: 16</p> <p>DOI: 10.1109/ACCESS.2019.2927785</p>		2019
<p>A Comprehensive Investigation of Modern Test Suite Optimization Trends, Tools and Techniques</p> <p><i>Ayesha Kiran Wasi Haider Butt Muhammad Waseem Anwar Bilal Maqbool Farooque Azam</i> <i>IEEE Access</i> , Volume 7, Pages 89093-89117</p> <p>Impact Factor: 3.745 Quartile: 1 Citations: 26</p> <p>DOI: 10.1109/ACCESS.2019.2926384</p>		2019
<p>Automated Model-Based Test Case Generation for Web User Interfaces (WUI) From Interaction Flow Modeling Language (IFML) Models</p> <p><i>Farooque Azam Nazish Yousaf Wasi Haider Butt Muhammad Waseem Anwar Muhammad Rashid</i></p>		2019

IEEE ACCESS, Volume 7, Pages 67331-67354 Impact Factor: 3.745 Quartile: 1 Citations: 29 DOI: 10.1109/ACCESS.2019.2917674	
A Systematic Review on Code Clone Detection <i>Qurat Ul Ain Wasi Haider Butt Muhammad Waseem Anwar Farooque Azam Bilal Maqbool</i> IEEE Access, Volume 7, Pages 86121-86144 Impact Factor: 3.745 Quartile: 1 Citations: 131 DOI: 10.1109/ACCESS.2019.2918202	2019
UMLPACE for Modeling and Verification of Complex Business Requirements in Event-Driven Process Chain (EPC) <i>Wasi Haider Butt Muhammad Rashid Aamir Naeem Anam Amjad Brig. Farooque Azam Muhammad Waseem Anwar</i> IEEE Access, NULL Impact Factor: 4.098 Quartile: 1 Citations: 10 DOI: 10.1109/ACCESS.2018.2883610	2018
Event-Driven Process Chain for Modeling and Verification of Business Requirements?A Systematic Literature Review <i>Anam Amjad Farooque Azam Muhammad Waseem Anwar Wasi Haider Butt Muhammad Rashid</i> IEEE Access, Volume 6, Pages 9027-9048 Impact Factor: 4.098 Quartile: 1 Citations: 46 DOI: 10.1109/ACCESS.2018.2791666	2018
Utility of CK Metrics in Predicting Size of Board-Based Software Games.... <i>Farooque Azam Nosheen sabahat Ali Afzal Malik</i> <i>Mehran University Research Journal of Engineering and Technology</i> , Volume: 36 Issue: 4 Pages: 989-1000 Impact Factor: N/A DOI: 10.22581/muet1982.1704.22	2017
Utility of CK Metrics in Predicting Size of Board-Based Software Games <i>Nosheen Sabahat Ali Afzal Malik Farooque Azam Nosheen Sabahat Ali Afzal Malik</i> <i>Mehran University Research Journal of Engineering and Technology</i> , Volume 36, No. 4, Pages 975-986 Impact Factor: - DOI: -	2017
A Size Estimation Model for Board-Based Desktop Games. <i>Ali Afzal Malik Nosheen Sabahat Farooque Azam</i> IEEE Access, Volume 5, Pages 4980-4990 Impact Factor: 3.557 Quartile: 1 Citations: 9 DOI: DOI:10.1109/ACCESS.2017.2678459	2017
Ranking in Web Services Discovery with User Preferences <i>Farooque Azam Nouman Nisar Abdul Wahab Muzaffar</i> <i>International Journal of Computer Science and Information Security</i> , ISSN:1947-5500,, Vol. 14, No. 12, Pages 978-984 Impact Factor: 0	2016
Hybridization of simulated annealing with genetic algorithm for cell formation problem <i>Mushtaq Khan Nawar Khan Adnan Tariq Liaqat Ali Farooque Azam Syed Husain Imran Jaffery Alam Zeb</i> <i>The International Journal of Advanced Manufacturing Technology</i> , Volume 86, Issue 5–8, Pages 2243–2254 Impact Factor: 2.209 Quartile: 2 Citations: 25 DOI: 10.1007/s00170-015-8288-3	2016
A Relation Extraction Framework for Biomedical Text Using Hybrid Feature Set <i>Abdul Wahab Muzaffar Farooque Azam Usman Qamar</i> <i>Computational and Mathematical Methods in Medicine</i> , Volume 2015, Article ID 910423, 12 pages Impact Factor: 0.887 Quartile: 3 Citations: 41 DOI: 10.1155/2015/910423	2015
Innovative Windows for Duplicate Detection <i>Farooque Azam Humaira Bano</i> <i>International Journal of Software Engineering and Its Applications</i> , Vol.9, No.1, Pages 95-104 Impact Factor: 0	2015
Limitations of Service Oriented Architecture and its Combination with Cloud Computing	2015

Impact Factor: 0

DOI: <https://www.bahria.edu.pk/ojs/index.php/bujict/article/view/86>

Disintegrating and Reduction of Risk Factor in 3-C's Model Communication Phase used in Global Software Development (G.S.D)

2014

Farooque Azam Muhammad Usman Nousheen Hashmi

Journal of Basic Applied Scientific Research, Vol.4(10), Pages 58-70

Impact Factor: 0

DOI: <https://www.semanticscholar.org/paper/Disintegrating-and-Reduction-of-Risk-Factor-in-Used-Usman-Azam/f4e518faf28c009c1ef75523f845cc32b170c067>

A Novel Cloud Based Data Management Framework for Team and Project Activities in Global Software Development (GSD)

2014

Farooque Azam Anum Tariq Sundas Iftikhar

Journal of Applied Environment and Biological Sciences, Volume 4

Impact Factor: 0

DOI: -

Architectural Knowledge Management (AKM) practices and tools for Global Software Development (GSD); A systematic literature review

2014

Farooque Azam Anum Tariq Sundas Iftikhar

Journal of Applied Environmental and Biological Sciences, Vol.4(9 S), Pages 70-81

Impact Factor: 0

Detection and classification of retinal lesions for grading of diabetic retinopathy

2014

Muhammad Usman Akram Shehzad Khalid Anam Tariq Shoab Ahmed Khan Farooque Azam

Computers in Biology and Medicine, Volume 45, Pages 161-171

Impact Factor: 1.24 | **Quartile:** 3 | **Citations:** 281

DOI: 10.1016/j.combiomed.2013.11.014

Opinion Mining: Issues and Challenges (A survey)

2012

Farooque Azam Bakhtawar Seerat

International journal of computer applications, Volume 49, Issue 9

Impact Factor: 0

DOI: 10.5120/7658-0762

Database Security and Encryption: A Survey Study

2012

Farooque Azam Iqra Basharat Abdul Wahab Muzaffar

International journal of computer applications, Volume 47, Issue 12

Impact Factor: 0

DOI: 10.5120/7242-0218

From Modules-to-Services: A Conceptual SOA Migration Approach Based on QoS

2012

Farooque Azam Mehrosh Khalid Muhammad Aqeel Iqbal

Journal of Basic and Applied Scientific Research, Vol. 2(12), Pages12246-12254

Impact Factor: 0

A Comparative Model for Tradeoff Analysis of QoS Attributes in SOA

2012

Farooque Azam Rabia Bashir Muhammad Aqeel Iqbal Aasia Khanum Hufsa Malik

Journal of Basic and Applied Scientific Research, Vol. 2(11), Pages11097-11105

Impact Factor: 0

Dynamic Web Service Composition and Parameters Matchmaking

2011

Farooque Azam Maria Allauddin

International Journal of Computer Applications, Volume 36, No.9, Pages 21-26

Impact Factor: 0

Service Crawling Using Google custom Search API

2011

Farooque Azam Maria Allauddin

International Journal of Computer Applications, Vol. 34(7):10-15

Impact Factor: 0

DOI: DOI:10.5120/4110-5911

- Managing Requirement Risks in Global Software Development** 2011
Farooque Azam Aurangzeb Khan Muhammad Shoaib Zafar
International Journal of Computer Applications , Vol. 33(7), Pages 1-5
Impact Factor: 0
- Usability Aspects in Pervasive Computing: Needs and Challenges** 2011
Farooque Azam Abdul Wahab Muzaffar Qureshi Hina Anwar Ali Saeed Khan
International Journal of Computer Applications , Volume 32(10), Pages 18-24
Impact Factor: 0
DOI:
https://www.researchgate.net/profile/Abdul_Wahab_Qureshi/publication/265905837_Usability_Aspects_in_Pervasive_Computing_Needs_and_Challenges/links/542953d70cf2e4ce940c9e9b/Usability-Aspects-in-Pervasive-Computing-Needs-and-Challenges.pdf
- Architecture Centric Development in Software Product Lines** 2011
Farooque Azam Aurangzeb Khan Jahanzaib Khan
International Journal of Computer Applications , Volume 30, No.2, Pages 6-12
Impact Factor: 0
- Performance Enhancement Techniques for Modern Reconfigurable Computing Systems** 2011
Farooque Azam M. Aqeel Iqbal Uzma Saeed Awan Saifullah Hammad
International Journal of Computer Applications , Volume 27, Issue 9
Impact Factor: 0
DOI: 10.5120/3327-4577
- Using Symmetric Multiprocessor Architectures for High Performance Computing Environments** 2011
Farooque Azam Mohsan Tanveer M. Aqeel Iqbal
International Journal of Computer Applications , Vol. 27(9), Pages 1-6
Impact Factor: 0
DOI: 10.5120/3332-4582
- Critical Aspects of Project Management Causing Major Impacts on Software Development** 2011
Farooque Azam M. Aqeel Iqbal Ahmed Ali Qureshi
International Journal of Computer Application , Volume 27, No.9, Pages 39-47
Impact Factor: 0
DOI: DOI:10.5120/3326-4576
- A Survey of Quality Assurance Frameworks for Service Oriented Systems** 2011
Farooque Azam Maria Allaudin Mehmooda Jabeen Zia
International Journal of Advancements in Technology, Volume 2, Issue 2
Impact Factor: 0
DOI: -
- Design of Novel Usability Driven Software Process Model** 2010
Farooque Azam Hina Gull Sardar Zafar Iqba
International Journal of Computer Science and Information Security, Volume 8, Issue 9, Pages 46-53
Impact Factor: 0
DOI: -
- A Two Dimensional Approach to Back and Forth Software Process Model** 2010
Sameera Amjad Wasi Haider Butt Farooque Azam
International Journal Computer Sciences and Information Security, Vol. 8, Issue 9, Pages 285-, Dec 2010
Impact Factor: 0
DOI: -
- An Efficient SJRR CPU Scheduling Algorithm** 2010
Saeeda Bibi Farooque Azam Sameera Amjad Wasi Haider Butt Hina Gul Rashid Ahmed Yasir Chaudhry
International Journal of Computer Science and Information Security, Vol. 8, No. 2
Impact Factor: 0
DOI: -

Conference Proceedings

- Suspicious Model Detection to Improve Model-Based System Development** 2025
Muhammad Waseem Anwar Marwareed Rehman Farooque Azam Saliha Ejaz

31st International Conference on Information and Software Technologies (ICIST 2025), Kaunas, Lithuania, October 16–17, 2025, res.country(132,)	
Citations: N/A	
DOI: 10.1007/978-3-031-48981-5	
Improving Federated Learning Efficiency with PruneFL: A Healthcare Perspective	2024
<i>Alvina Muneeb Dr Farooque Azam Dr Imran Shafi Muhammad Waseem Anwar Muhammad Muneeb Arshad</i>	
13th International Conference on Computing and Pattern Recognition (ICCPR 2024), res.country(48,)	
Citations: N/A	
DOI: Accepted	
PERFORMANCE COMPARISON OF SINGLE CODE BASE DEVELOPMENT TOOLS: FLUTTER, REACT NATIVE, AND XAMARIN	2024
<i>Faran Mushtaq Dr Farooque Azam Muhammad Waseem Anwar</i>	
14th International Conference on Software Technology and Engineering (ICSTE 2024), res.country(48,)	
Citations: N/A	
DOI: Accepted	
Implementing ISO 27001 Security Measures in Educational Open-Source ERP Systems	2024
<i>Saima Bibi Dr Farooque Azam Muhammad Waseem Anwar</i>	
14th International Conference on Software Technology and Engineering (ICSTE 2024), res.country(48,)	
Citations: N/A	
DOI: Accepted	
A Framework for Clone Detection in UML Models (UMCD)	2024
<i>Aysha Irshad Dr Farooque Azam Muhammad Waseem Anwar</i>	
16th International Conference on Computer Modeling and Simulation (ICCMS 2024), res.country(48,)	
Citations: N/A	
DOI: Accepted & Presented	
A Novel Model-Driven Framework for Performance Testing of Service-Oriented Architecture	2023
<i>Ibrahim Khalil Farooque Azam Wasi Haider Butt Muhammad Waseem Anwar Yawar Rasheed Israr Ahmad</i>	
International Bhurban Conference on Applied Sciences & Technology, IBCAST, res.country(177,)	
Citations: N/A	
DOI: https://doi.org/10.1109/IBCAST59916.2023.10712852	
A Lecture Centric Automated Distractor Generation for Post-Graduate Software Engineering Courses	2022
<i>Rudeema Chughtai Farooque Azam Dr Wasi Haider Butt Dr Umar Farooq Muhammad Waseem Anwar</i>	
2022 International Conference on Frontiers of Information Technology, FIT 2022, res.country(177,)	
Citations: N/A	
DOI: 10.1109/FIT57066.2022.00028	
Intelligent Agents in Educational Institutions: NEdBOT - NLP-based Chatbot for Administrative Support Using DialogFlow	2022
<i>Muhammad Shahroze Ali Farooque Azam Aon Safdar Muhammad Waseem Anwar</i>	
Proceedings - 2022 IEEE International Conference on Agents, ICA 2022, res.country(13,)	
Citations: N/A	
DOI: 10.1109/ICA55837.2022.00012	
MoDLF – A Model-Driven Deep Learning Framework for Autonomous Vehicle Perception (AVP)	2022
<i>Aon Safdar Farooque Azam Muhammad Usman Akram Yawar Rasheed</i>	
Proceedings of the 25th International Conference on Model Driven Engineering Languages and Systems, res.country(233,)	
Citations: N/A	
DOI: 10.1145/3550355.3552453	
Device Interoperability for Industrial IoT using Model-Driven Architecture	2022
<i>Anam Amjad Dr Farooque Azam Dr Waseem Anwar</i>	
2022 24th International Multitopic Conference, INMIC 2022, res.country(177,)	
Citations: N/A	
DOI: 10.1109/INMIC56986.2022.9972976	
A Systematic Review on Fully Automated Online Exam Proctoring Approaches	2022
<i>Taskeen Fatima Dr Farooque Azam Abdul Wahab Muzaffar</i>	
2022 24th International Multitopic Conference, INMIC 2022, res.country(177,)	
Citations: N/A	
DOI: 10.1109/INMIC56986.2022.9972964	

Seamless Runtime Transformations from Natural Language to Formal Methods - A usecase of Z-Notation	2022
<p><i>Misbah Mehboob Awan Wasi Haider Butt MuhammadWaseemAnwar Farooque Azam</i> 2022 17th Annual System of Systems Engineering Conference (SOSE), res.country(233,)</p> <p>Citations: N/A DOI: 10.1109/SOSE55472.2022.9812644</p>	
Deep-learning based framework for sentiment analysis in Urdu language	2022
<p><i>Farooque Azam Maria Masood Muhammad Waseem Anwar Jalees Ur Rahman</i> 2022 2nd International Conference on Digital Futures and Transformative Technologies (ICoDT2), res.country(177,)</p> <p>Citations: N/A DOI: 10.1109/ICoDT255437.2022.9787451</p>	
Image Steganography using Least Significant Bit (LSB) – A Systematic Literature Review	2022
<p><i>Muhammad Rashid Farooque Azam Muhammad Abbas Yawar Rasheed Muhammad Waseem Anwar Adnan Aslam Saud S. Alotaibi</i> 2022 2nd International Conference on Computing and Information Technology (ICCIT), res.country(233,)</p> <p>Citations: 16 DOI: 10.1109/ICCIT52419.2022.9711628</p>	
A Model Driven Framework for Efficient Bandwidth Allocation in Fog Computing Using Priority Algorithm	2022
<p><i>Mehwish Naz Muhammad Rashid Farooque Azam Muhammad Abbas Yawar Rasheed Mohammed H Sinky Muhammad Waseem Anwar</i> 2022 2nd International Conference on Computing and Information Technology (ICCIT), res.country(233,)</p> <p>Citations: N/A DOI: 10.1109/ICCIT52419.2022.9711637</p>	
Integration of Smart Traffic Fog Nodes and Homes through a Model Driven Approach	2022
<p><i>Saud S. Alotaib Muhammad Rashid Farooque Azam Waseem Abbas Yawar Rasheed Mohammed H Sinky Muhammad Waseem Anwa</i> Proceedings of 2022 2nd International Conference on Computing and Information Technology, ICCIT 2022, res.country(192,)</p> <p>Citations: N/A DOI: 10.1109/ICCIT52419.2022.9711644</p>	
A Novel Model Driven Approach for Trajectory-Based Technique of Autonomous Vehicle Route Prediction	2021
<p><i>Ali Nawaz Attique Ur Rehman Tahir Mohammad Ali Farooque Azam Yawar Rasheed Muhammad Waseem Anwar</i> International Conference on Emerging Technologies, ICET 2021, res.country(233,)</p> <p>Citations: N/A DOI: 10.1109/ICET54505.2021.9689848</p>	
The Applications of Model Driven Architecture (MDA) in Wireless Sensor Networks (WSN) - Techniques and Tools	2019
<p><i>Muhammad Waseem Anwar Muazzam A. Khan Wasi Haider Butt Farooque Azam</i> Future of Information and Communication Conference FICC 2019, res.country(233,)</p> <p>Citations: N/A DOI: 10.1007/978-3-030-12388-8_2</p>	
A Model Driven Approach for Token Based Code Clone Detection Techniques-An Introduction to UMLCCD	2019
<p><i>Qurat Ul Ain Muhammad Waseem Anwar Ayesha Kiran Qurat Ul Ain Farooque Azam</i> 2019 8th International Conference on Educational and Information Technology, res.country(231,)</p> <p>Citations: N/A DOI: 10.1145/3318396.3318440</p>	
Towards the Selection of Optimum Alarms System in Leading Industry Automation Software	2019
<p><i>Hanny Tufail Muhammad Waseem Anwar Iqra Qasim Farooque Azam</i> 2019 8th International Conference on Industrial Technology and Management (ICITM), res.country(231,)</p> <p>Citations: N/A DOI: 10.1109/ICITM.2019.8710731</p>	
A Model Driven Approach for State Management in Mobile Applications	2019
<p><i>Mehreen Khan Muhammad Waseem Anwar Fatima Samea Mudassar Adeel Ahmed Farooque Azam</i> 2019 8th International Conference on Software and Computer Applications, res.country(157,)</p> <p>Citations: N/A DOI: 10.1145/3316615.3316637</p>	

A UML Profile for Multi-Cloud Service Configuration (UMLPMSC) in Event-driven Serverless Applications <i>Fatima Samea Muhammad Waseem Anwar Mehreen Khan Muhammad Rashid Farooque Azam</i> <i>2019 8th International Conference on Software and Computer Applications, res.country(157,)</i> Citations: N/A DOI: 10.1145/3316615.3316636	2019
A Framework for User Characterization based on Tweets Using Machine Learning Algorithms <i>Kinza Zahra Farooque Azam Wasi Haider Butt Fauqia Ilyas</i> <i>VII International Conference on Network, Communication and Computing, res.country(227,)</i> Citations: N/A DOI: 10.1145/3301326.3301373	2018
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