

Muhammad Shahzad

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School of Electrical Engineering and Computer Science

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About

Dr. Muhammad Shahzad is working as Associate Professor in the School of Electrical Engineering and Computer Science. Dr. Muhammad Shahzad has a PhD in Remote Sensing & Image Analysis, 3d Computer Vision. Dr. Muhammad Shahzad has published 64 research articles & conference papers having a citation count of 877, carried out 9 projects and filed 6 intellectual property.

Qualifications

MSc in (Robotics, 3-D Computer Vision & Signal Processing) Fachhochschule Bonn-Rhein-Sieg , Germany	- 2011
BE in (Electrical Engg) NUST, Islamabad , Pakistan	- 2004
PhD in Remote Sensing & Image Analysis, 3d Computer Vision	2011 - 2016

Experience

Associate Professor School of Electrical Engineering and Computer Science	2021- Present
Assistant Professor School of Electrical Engineering and Computer Science	2019 - 2021
Assistant Professor School of Electrical Engineering and Computer Science	2016 - 2019
Assistant Professor School of Electrical Engineering and Computer Science	2016 - 2016
National Development Complex (NDC), NESCOM , NESCOM Sector H-11 Islamabad	2004 - 2008

Professional Memberships

PEC	Since 2005
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Research Projects

National Projects

Water Resource Estimation by Satellite-Based Image Analysis (WASABI) – Extension.	2023
Funding Agency: DAAD	
Amount: PKR 4,491,635.00	
Status: Completed	
Enabling Smart Yield Boosting: Rice Phenology Estimation Using Airborne Multispectral Remote Sensing Data	2021
Funding Agency: DAAD	
Amount: PKR 8,711,605.00	
Status: Completed	
Forest Monitoring & Change Detection using Remote Sensing Data (Extension)	2020
Funding Agency: DAAD	
Amount: PKR 8,022,662.00	
Status: Approved_inprocess	
Vision Based Sense and Avoid system design for UAV	2017
Funding Agency: NESCOM	
Amount: PKR 200,000.00	
Status: Completed	
Development of Vision Based Navigation for Unmanned Aerial System	2017
Funding Agency: NESCOM	
Amount: PKR 200,000.00	
Status: Completed	
Water Resource Estimation by Satellite Based Image Analysis (WASABI)	2018
Funding Agency: DAAD	
Amount: PKR 12,000,000.00	
Status: Completed	
Crop Monitoring via Remote Sensing from Earth Observation Satellites to UAVs	2018
Funding Agency: DAAD	
Amount: PKR 12,352,440.00	
Status: Approved_inprocess	
Forest Monitoring and changed detection using remote sensing data	2018
Funding Agency: DAAD	
Amount: PKR 10,000,000.00	
Status: Completed	
Smart Load Enabler for Micro-Grids in Pakistan	2016
Funding Agency: USAID / USPCASE	
Amount: PKR 2,690,000.00	
Status: Completed	

International Projects

Research Articles

Beyond local patches: Preserving global-local interactions by enhancing self-attention via 3D point cloud tokenization	2024
Muhammad Shahzad Saqib Ali Khan Muhammad Moazam Fraz Xiao Xiang Zhu Muhammad Qasim Khan	
Pattern Recognition , Volume 155, Article Number 110712	
Impact Factor: 7.500 Quartile: 1	
DOI: 10.1016/j.patcog.2024.110712	
Vision Based 3D Localization of UAV Using Deep Image Matching	2024
Mansoor Khurshid Muhammad Shahzad Hasan Ali Khattak Muhammad Imran Malik Muhammad Moazam Fraz	
IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, Volume: 17, Pages: 12020-12030	
Impact Factor: 4.700 Quartile: 1 Citations: 3	
DOI: 10.1109/JSTARS.2024.3422310	
Person re-identification: A retrospective on domain specific open challenges and future trends	2023

<p><i>Asmat Zahra Nazia Perwaiz Muhammad Shahzad Muhammad Moazam Fraz</i> <i>Pattern Recognition</i> , Volume 142, Article Number: 109669</p> <p>Impact Factor: 8.0 Quartile: 1 Citations: 58 DOI: 10.1016/j.patcog.2023.109669</p>	
<p>TransPose Re-ID: transformers for pose invariant person Re-identification</p> <p><i>Nazia Perwaiz Muhammad Shahzad Muhammad Moazam Fraz</i> <i>Journal of Experimental & Theoretical Artificial Intelligence</i>, Pages:14</p> <p>Impact Factor: 2.296 Quartile: 3 DOI: 10.1080/0952813X.2023.2214570</p>	2023
<p>Residual learning with annularly convolutional neural networks for classification and segmentation of 3D point clouds</p> <p><i>Rabbia Hassan Muhammad Moazam Fraz Muhammad Shahzad Muhammad Asif Ali Rajput</i> <i>Neurocomputing</i> , Volume 526, Pages 96-108</p> <p>Impact Factor: 5.779 Quartile: 2 Citations: 15 DOI: 10.1016/j.neucom.2023.01.026</p>	2023
<p>Ubiquitous vision of transformers for person re-identification</p> <p><i>Nazia Perwaiz Muhammad Shahzad Muhammad Moazam Fraz</i> <i>Machine Vision and Applications</i> , Volume 34, Issue 2, Article Number 27</p> <p>Impact Factor: 2.983 Quartile: 2 Citations: 6 DOI: 10.1007/s00138-023-01376-4</p>	2023
<p>Attention augmented distance regression and classification network for nuclei instance segmentation and type classification in histology images</p> <p><i>Ghulam Murtaza Dogar Muhammad Moazam Fraz Muhammad Shahzad</i> <i>Biomedical Signal Processing and Control</i> , Volume 79, Part 2, Article Number 104199</p> <p>Impact Factor: 5.076 Quartile: 2 Citations: 24 DOI: 10.1016/j.bspc.2022.104199</p>	2023
<p>Smart surveillance with simultaneous person detection and re-identification</p> <p><i>Nazia Perwaiz Muhammad Moazam Fraz Muhammad Shahzad</i> <i>Multimedia Tools and Applications</i> , Pages 1-22</p> <p>Impact Factor: 2.577 Quartile: 2 Citations: 3 DOI: 10.1007/s11042-022-13458-y</p>	2022
<p>Per-former: rethinking person re-identification using transformer augmented with self-attention and contextual mapping</p> <p><i>Nazia Perwaiz Muhammad Moazam Fraz Muhammad Shahzad</i> <i>Visual Computer</i> , Pages 1-16</p> <p>Impact Factor: 2.835 Quartile: 2 Citations: 7 DOI: 10.1007/s00371-022-02577-0</p>	2022
<p>Orientation aware weapons detection in visual data: a benchmark dataset</p> <p><i>Nazeef Ul Haq Muhammad Moazam Fraz Tufail Sajjad Shah Hashmi Muhammad Shahzad</i> <i>Computing</i> , Pages 1-24</p> <p>Impact Factor: 2.420 Quartile: 2 Citations: 6 DOI: https://doi.org/10.1007/s00607-022-01095-0</p>	2022
<p>Detection and Grading of Hypertensive Retinopathy Using Vessels Tortuosity and Arteriovenous Ratio</p> <p><i>Sufian Al Badawi Muhammad Moazam Fraz Muhammad Shahzad Imran Mahmood Sajid Javed Emad Mosalam Ajay Kamath Nileshwar</i> <i>Journal of Digital Imaging</i> , Pages 1-21</p> <p>Impact Factor: 4.056 Quartile: 1 Citations: 28 DOI: 10.1007/s10278-021-00545-z</p>	2022
<p>UCL: Unsupervised Curriculum Learning for water body classification from remote sensing imagery</p> <p><i>Nosheen Abid Muhammad Shahzad Muhammad Imran Malik Ulrich Schwanecke Adrian Ulges György Kovács Faisal Shafait</i> <i>International Journal of Applied Earth Observation and Geoinformation</i>, Volume 105, Article Number 102568</p> <p>Impact Factor: 7.672 Quartile: 1 Citations: 33 DOI: https://doi.org/10.1016/j.jag.2021.102568</p>	2021
<p>Cross-feature trained machine learning models for QoT-estimation in optical networks</p> <p><i>Fehmida Usmani Ihtesham Khan Mehek Siddiqui Mahnoor Khan Muhammad Bilal M Umar Masood Arsalan Ahmad Muhammad Shahzad Vittorio Curri</i> <i>Optical Engineering</i> , Volume 60(12), Article Number 125106</p>	2021

Impact Factor: 1.084 Quartile: 4 Citations: 5 DOI: https://doi.org/10.1117/1.OE.60.12.125106	
PROUD-MAL: static analysis-based progressive framework for deep unsupervised malware classification of windows portable executable <i>Syed Khurram Jah Rizwi Warda Aslam Muhammad Shahzad Shahzad Saleem Muhammad Moazam Fraz</i> <i>Complex & Intelligent Systems</i> , Pages 1-13 Impact Factor: 4.927 Quartile: 2 Citations: 32 DOI: https://doi.org/10.1007/s40747-021-00560-1	2021
Convolutional neural network for quality of transmission prediction of unestablished lightpaths <i>Muhammad Umar Masood Fehmida Usmani Ihtesham Khan Arsalan Ahmad Muhammad Shahzad Vittorio Curri</i> <i>Microwave and Optical Technology Letters</i> , Volume 63, Issue10, Pages 2461-2469 Impact Factor: 1.311 Quartile: 4 Citations: 14 DOI: 10.1002/mop.32996	2021
A multiapproach generalized framework for automated solution suggestion of support tickets <i>Syed S. Ali Zaidi Muhammad Moazam Fraz Muhammad Shahzad Sharifullah Khan</i> <i>International Journal of Intelligent Systems</i> , Pages 1-28 Impact Factor: 8.709 Quartile: 1 Citations: 14 DOI: https://doi.org/10.1002/int.22701	2021
AI-ForestWatch: semantic segmentation based end-to-end framework for forest estimation and change detection using multi-spectral remote sensing imagery <i>Annus Zulfiqar Muhammad M. Ghaffar Muhammad Shahzad Christian Weis Muhammad Imran Malik Faisal Shafait Norbert Wehn</i> <i>Journal of Applied Remote Sensing</i> , Volume 15(2), Article Number 024518 Impact Factor: 1.568 Quartile: 4 Citations: 25 DOI: https://doi.org/10.1117/1.JRS.15.024518	2021
Stochastic attentions and context learning for person re-identification <i>Nazia Perwaiz Muhammad Moazam Fraz Muhammad Shahzad</i> <i>PeerJ Computer Science</i> , Volume 7, Article Number e447 Impact Factor: 2.411 Quartile: 2 Citations: 7 DOI: 10.7717/peerj-cs.447	2021
Assisting UAV Localization Via Deep Contextual Image Matching <i>Muhammad Shahzad Muhammad Hamza Mughal Muhammad Jawad Khokhar</i> <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , Volume 14, Pages 2445-2457 Impact Factor: 4.715 Quartile: 1 Citations: 56 DOI: 10.1109/JSTARS.2021.3054832	2021
Motion Reveal Emotions: Identifying Emotions from Human Walk Using Chest Mounted Smartphone <i>Muhammad Zeeshan Muhammad Arslan Hashmi Qaiser Riaz Muhammad Shahzad Muhammad Moazam Fraz</i> <i>IEEE Sensors Journal</i> , Volume 20, Issue 22, Pages 13511-13522 Impact Factor: 3.301 Quartile: 2 Citations: 34 DOI: 10.1109/JSEN.2020.3004399	2020
DCARN: Deep Context Aware Recurrent Neural Network for Semantic Segmentation of Large Scale Unstructured 3D Point Cloud <i>Muhammad Moazam Fraz Saba Mehmood Muhammad Shahzad</i> <i>Neural Processing Letters</i> , Volume 39, Issue 7, Pages 2395-2405 Impact Factor: 2.908 Quartile: 2 Citations: 2 DOI: 10.1007/s11063-020-10368-8	2020
Multi-sized Object Detection Using Spaceborne Optical Imagery <i>Muhammad Haroon Muhammad Shahzad Muhammad Moazam Fraz</i> <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , Volume 13, Pages 3032-3046 Impact Factor: 3.784 Quartile: 2 Citations: 51 DOI: 10.1109/JSTARS.2020.3000317	2020
Dense-CaptionNet: a Sentence Generation Architecture for Fine-grained Description of Image Semantics <i>Imran Khurram Muhammad Moazam Fraz Muhammad Shahzad Nasir M Rajpoot</i> <i>Cognitive Computation</i> , Pages 1-27 Impact Factor: 5.418 Quartile: 1 Citations: 11	2020

DOI: <https://doi.org/10.1007/s12559-019-09697-1>

Sustainable vehicle-assisted edge computing for big data migration in smart cities <i>Maria Kanwal Anis-ur-Rahman Muhammad Shahzad Maria Kanwal Asad Waqar Malik Imran Mahmood</i> <i>IEEE Internet of Things Journal</i> , Volume: 7 , Issue: 3, Pages 1857-1871 Impact Factor: 9.471 Quartile: 1 Citations: 14 DOI: 10.1109/JIOT.2019.2957127	2020
Person Re-Identification Using Deep Modeling of Temporally Correlated Inertial Motion Patterns <i>Imad Gohar Qaiser Riaz Muhammad Shahzad Muhammad Zeeshan UI Hasnain Hashmi Hasan Tahir Muhammad Ehsan UI Haq</i> <i>Sensors</i> , Volume 20, Issue 3, Article Number 949 Impact Factor: 3.576 Quartile: 1 Citations: 16 DOI: https://doi.org/10.3390/s20030949	2020
Caveat Emptor: The Risks of Using Big Data for Human Development <i>Siddique Latif Adnan Qayyum Muhammad Usama Junaid Qadir Andrej Zwitter Muhammad Shahzad</i> <i>IEEE Technology Society & Magazine</i> , Volume 38, Issue 3, Pages 82-90 Impact Factor: 1.256 Quartile: 4 Citations: 29 DOI: 10.1109/MTS.2019.2930273	2019
What Lies Beneath One's Feet? Terrain Classification Using Inertial Data of Human Walk <i>Muhammad Zeeshan UI Hasnain Hashmi [OrcID] Qaiser Riaz Mehdi Hussain Muhammad Shahzad</i> <i>Applied Sciences</i> , Vol. 9 Issue 15, p3099-3099 Impact Factor: 2.474 Quartile: 2 Citations: 27 DOI: 10.3390/app9153099	2019
VR-PROUD: Vehicle Re-identification using PROgressive Unsupervised Deep architecture <i>Muhammad Shahzad Raja Muhammad Saad Bashir Muhammad Moazam Fraz</i> <i>Pattern Recognition</i> , Volume: 90 Pages: 52-65, June 2019 Impact Factor: 7.196 Quartile: 1 Citations: 61 DOI: 10.1016/j.patcog.2019.01.008	2019
DPRNet: Deep 3D Point based Residual Network for Semantic Segmentation and Classification of 3D Point Clouds <i>Muhammad Shahzad Saira Arshad Qaiser Riaz Muhammad Moazam Fraz</i> <i>IEEE Access</i> , Volume: 7, Pages: 68892-68904 Impact Factor: 3.745 Quartile: 1 Citations: 30 DOI: 10.1109/ACCESS.2019.2918862	2019
Move Your Body: Age Estimation Based on Chest Movement During Normal Walk <i>Muhammad Shahzad Qaiser Riaz Muhammad Zeeshan UI Hasnain Hashmi Muhammad Arsalan Hashmi Hassan Errami Andreas Weber</i> <i>IEEE Access</i> , IEEE ACCESS Volume: 7 Pages: 28510-28524 Impact Factor: 3.745 Quartile: 1 Citations: 22 DOI: 10.1109/ACCESS.2019.2901959	2019
Buildings Detection in VHR SAR Images Using Fully Convolution Neural Networks <i>Muhammad Shahzad Michael Maurer Friedrich Fraundorfer Yuanyuan Wang Xiao Xiang Zhu</i> <i>IEEE Transactions on Geoscience and Remote Sensing</i> , Volume: 57, Issue: 2, Pages 1100-1116 Impact Factor: 5.63 Quartile: 1 Citations: 117 DOI: 10.1109/TGRS.2018.2864716	2019
Person Re-Identification Using Hybrid Representation Reinforced by Metric Learning <i>Muhammad Shahzad Nazia Perwaiz Muhammad Moazam Fraz</i> <i>IEEE Access</i> , Volume: 6 Pages: 77334-77349 , November 2018 Impact Factor: 4.098 Quartile: 1 Citations: 32 DOI: 10.1109/ACCESS.2018.2882254	2018

Conference Proceedings

Transfer learning Aided QoT Computation in Network Operating with the 400ZR Standard <i>Fehmida Usmani Ihtesham Khan Muhammad Umar Masood Arsalan Ahmad Muhammad Shahzad Vittorio Curri</i> <i>2022 International Conference on Optical Network Design and Modeling, ONDM 2022</i> , res.country(178,) Citations: N/A DOI: 10.23919/ONDM54585.2022.9782856	2024
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Multi-year monitoring of wheat phenology and effect of climate change in the south Asian region using Sentinel-2 NDVI time series analysis <i>Vaneeza Mehmood Asad Imtiaz Malik Zuhair Zafar Muhammad Shahzad Karsten Berns Muhammad Moazam Fraz</i> <i>Image and Signal Processing for Remote Sensing XXIX, res.country(165,)</i> Citations: N/A DOI: 10.1117/12.2683148	2023
Time Series-Based Active Labeling Framework For Curating A Multispectral Sentinel 2 Imagery Dataset For Crop Type Mapping <i>Vaneeza Mehmood Ramesha Murtaza Dr. Zuhair Zafar Dr. Muhammad Shahzad Prof. Dr. Karsten Berns Dr. Muhammad Moazam Fraz</i> <i>2023 IEEE International Geoscience and Remote Sensing Symposium (IGARSS), res.country(233,)</i> Citations: N/A DOI: 10.1109/IGARSS52108.2023.10282084	2023
Crop Type Classification using Multi-temporal Sentinel-2 Satellite Imagery: A Deep Semantic Segmentation Approach <i>Asim Hameed Khan Zuhair Zafar Muhammad Shahzad Karsten Berns Muhammad Moazam Fraz</i> <i>2023 International Conference on Robotics and Automation in Industry, ICRAI 2023, res.country(177,)</i> Citations: N/A DOI: 10.1109/ICRAI57502.2023.10089586	2023
Performance Analysis of Transfer-learning Approaches for QoT Estimation of Network Operating with 400ZR <i>Fehmida Usmani Ihtesham Khan Hafsa Tariq Muhammad Umar Masood Muhammad Shahzad Arsalan Ahmad Vittorio Curri</i> <i>Asia Communications and Photonics Conference, ACP, res.country(48,)</i> Citations: N/A DOI: 10.1109/ACP55869.2022.10088462	2022
Query Based Iterative Learning Approach for Lightpath Deployment in Optical Networks <i>Fehmida Usmani Ihtesham Khan Hafsa Tariq Muhammad Shahzad Arsalan Ahmad Vittorio Curri</i> <i>Asia Communications and Photonics Conference, ACP, res.country(48,)</i> Citations: N/A DOI: 10.1109/ACP55869.2022.10089006	2022
Extraction of Rice Phenological Metrics Using Temporally Correlated Multispectral Drone Imagery <i>Dawood Wasif M Q Khan R Murtaza M Z Ahmad Zuhair Zafar Muhammad Shahzad Karsten Berns Muhammad Moazam Fraz</i> <i>16th International Conference on Signal-Image Technology and Internet-Based Systems, SITIS 2022, res.country(75,)</i> Citations: N/A DOI: 10.1109/SITIS57111.2022.00039	2022
Multimodal Knowledge Reasoning for Enhanced Visual Question Answering <i>Afzaal Hussain Ifrah Maqsood Muhammad Shahzad Muhammad Moazam Fraz</i> <i>Proceedings - 16th International Conference on Signal-Image Technology and Internet-Based Systems, SITIS 2022, res.country(75,)</i> Citations: N/A DOI: 10.1109/SITIS57111.2022.00048	2022
QoT- Estimation Assisted by Transfer learning in Extended C-band Network Operating on 400ZR <i>Fehmida Usmani Ihtesham Khan Muhammad Umar Masood Arsalan Ahmad Muhammad Shahzad Vittorio Curri</i> <i>2022 IEEE Photonics Society Summer Topicals Meeting Series, SUM 2022 - Proceedings, res.country(156,)</i> Citations: N/A DOI: 10.1109/SUM53465.2022.9858280	2022
Evaluating Cross-feature Trained Machine Learning Models for Estimating QoT of Unestablished Lightpaths <i>Fehmida Usmani Ihtesham Khan Mehek Siddiqui Mahnoor Khan Muhamamd Bilal M Umar Masood Arsalan Ahmad Muhammad Shahzad Vittorio Curri</i> <i>3rd International Conference on Electrical, Communication and Computer Engineering, ICECCE 2021, res.country(157,)</i> Citations: N/A DOI: 10.1109/ICECCE52056.2021.9514154	2022
Burnt Forest Estimation from Sentinel-2 Imagery of Australia using Unsupervised Deep Learning <i>Nosheen Abid Muhammad Imran Malik Muhammad Shahzad Faisal Shafait Haider Ali Muhammad Mohsin Ghaffar Christian Weis Norbert Wehn Marcus Liwicki</i> <i>2021 Digital Image Computing: Techniques and Applications (DICTA), res.country(13,)</i> Citations: N/A DOI: 10.1109/DICTA52665.2021.9647174	2021

QuantYOLO: A High-Throughput and Power-Efficient Object Detection Network for Resource and Power Constrained UAVs <i>Muhammad Gohar Javed Minahil Raza Muhammad Mohsin Ghaffar Christian Weis Faisal Shafait Norbert Wehn Muhammad Shahzad</i> <i>International Conference Document Analysis and Recognition 2021</i> , res.country(43,) Citations: N/A DOI: DOI: 10.1109/DICTA52665.2021.9647121	2021
Progressive Unsupervised Deep Transfer Learning for Forest Mapping in Satellite Image <i>Nouman Ahmed Sudipan Saha Muhammad Shahzad Muhammad Moazam Fraz Xiao Xiang Zhu</i> <i>International Conference on Computer Vision (ICCV)</i> , res.country(233,) Citations: N/A DOI: 10.1109/ICCVW54120.2021.00089	2021
Deep Learning for Face Detection: Recent Advancements <i>Hafiz Syed Ahmed Qasim Muhammad Shahzad Muhammad Moazam Fraz</i> <i>International Conference on Digital Futures and Transformative Technologies (ICoDT2)</i> , res.country(177,) Citations: N/A DOI: 10.1109/ICoDT252288.2021.9441476	2021
Rotation Aware Object Detection Model with Applications to Weapons Spotting in Surveillance Videos <i>Nazeef UI Haq Tufail Sajjad Shah Hashmi Muhammad Moazam Fraz Muhammad Shahzad</i> <i>International Conference on Digital Futures and Transformative Technologies (ICoDT2)</i> , res.country(177,) Citations: 1 DOI: 10.1109/ICoDT252288.2021.9441538	2021
Large Scale Face Recognition In the Wild: Technical Challenges and Research Directions <i>Abdul Mannan Shahid Muhammad Moazam Fraz Muhammad Shahzad</i> <i>International Conference on Digital Futures and Transformative Technologies (ICoDT2)</i> , res.country(177,) Citations: 2 DOI: 10.1109/ICoDT252288.2021.9441525	2021
Deep Learning Based Land Cover and Crop Type Classification: A Comparative Study <i>Asim Hameed Khan Muhammad Moazam Fraz Muhammad Shahzad</i> <i>International Conference on Digital Futures and Transformative Technologies (ICoDT2)</i> , res.country(177,) Citations: 2 DOI: 10.1109/ICoDT252288.2021.9441483	2021
IAB-Net: Informative and Attention Based Person Re-Identification <i>Rao Faizan Muhammad Moazam Fraz Muhammad Shahzad</i> <i>International Conference on Digital Futures and Transformative Technologies (ICoDT2)</i> , res.country(177,) Citations: 3 DOI: 10.1109/ICoDT252288.2021.9441480	2021
Group Activity Recognition in Visual Data: A Retrospective Analysis of Recent Advancements <i>Shoaib Sattar Yahya Sattar Muhammad Shahzad Muhammad Moazam Fraz</i> <i>2021 International Conference on Digital Futures and Transformative Technologies (ICoDT2)</i> , res.country(177,) Citations: 2 DOI: 10.1109/ICoDT252288.2021.9441478	2021
Application of Deep Learning for Weapons Detection in Surveillance Videos <i>Tufail Sajjad Shah Hashmi Nazeef UI Haq Muhammad Moazam Fraz Muhammad Shahzad</i> <i>2021 International Conference on Digital Futures and Transformative Technologies (ICoDT2)</i> , res.country(177,) Citations: 11 DOI: 10.1109/ICoDT252288.2021.9441523	2021
Forecasting of Electricity Generation for Hydro Power Plants <i>Umer Javaid Muhammad Moazam Fraz Imran Mehmood Omar Arif Muhammad Shahzad Muhammad Shahzad Muhammad Shahzad</i> <i>IEEE 17th International Conference on Smart Communities: Improving Quality of Life Using ICT, IoT and AI (HONET 2020)</i> res.country(233,) Citations: 1 DOI: 10.1109/HONET50430.2020.9322841	2020
Smart Visual Surveillance: Proactive Person Re-identification instead of Impulsive Person Search <i>Nazia Perwaiz Muhammad Moazam Fraz Muhammad Shahzad</i> <i>2020 IEEE 23rd International Multitopic Conference (INMIC)</i> , res.country(177,)	2020

Citations: N/A DOI: 10.1109/INMIC50486.2020.9318107	
Runway Detection And Localization In Aerial Images Using Deep Learning <i>Javeria Akbar Muhammad Shahzad Muhammad Imran Malik Adnan Ul-Hasan Faisal Shafait</i> <i>Digital Image Computing: Techniques and Applications (DICTA), res.country(13,)</i> Citations: N/A DOI: 10.1109/DICTA47822.2019.8945889	2019
Hierarchical Refined Local Associations for Robust Person Re-Identification <i>Nazia Perwaiz Muhammad Moazam Fraz Muhammad Shahzad</i> <i>2019 International Conference on Robotics and Automation in Industry (ICRAI), res.country(177,)</i> Citations: 9 DOI: 10.1109/ICRAI47710.2019.8967389	2019
End to End Person Re-Identification for Automated Visual Surveillance <i>Saadia Batool Muhammad Zeeshan Ali Muhammad Shahzad Muhammad Moazam Fraz</i> <i>2018 IEEE International Conference on Image Processing, Applications and Systems (IPAS), res.country(75,)</i> Citations: 9 DOI: 10.1109/IPAS.2018.8708882	2018
Automated Military Vehicle Detection From Low-Altitude Aerial Images <i>Farrukh Kamran Faisal Shafait Muhammad Shahzad</i> <i>2018 Digital Image Computing: Techniques and Applications (DICTA), res.country(13,)</i> Citations: N/A DOI: 10.1109/DICTA.2018.8615865	2018
Detailed sentence generation architecture for image semantics description <i>Imran Khurram Muhammad Moazam Fraz Muhammad Shahzad</i> <i>International Symposium on Visual Computing (ISVC) 2018, res.country(233,)</i> Citations: 5 DOI: 10.1007/978-3-030-03801-4_37	2018
Two Stream Deep CNN-RNN Attentive Pooling Architecture for Video-Based Person Re-identification <i>Wajeeha Ansar Muhammad Moazam Fraz Muhammad Shahzad Imad Gohar S. Javed S. K. Jung</i> <i>Iberoamerican Congress on Pattern Recognition CIARP 2018, res.country(68,)</i> Citations: 5 DOI: 10.1007/978-3-030-13469-3_76	2018
DUPL-VR: Deep Unsupervised Progressive Learning for Vehicle Re-Identification <i>Raja Muhammad Saad Bashir Muhammad Moazam Fraz Muhammad Shahzad</i> <i>International Symposium on Visual Computing , res.country(233,)</i> Citations: 10 DOI: 10.1007/978-3-030-03801-4_26	2018
Extraction of Buildings in VHR SAR Images Using Fully Convolution Neural Networks <i>Muhammad Shahzad Michael Maurer Friedrich Fraundorfer Yuanyuan Wang</i> <i>IEEE International Geoscience and Remote Sensing Symposium (IGARSS 2018), res.country(68,)</i> Citations: N/A DOI: 10.1109/IGARSS.2018.8519603	2018
Simultaneous Segmentation of Multiple Retinal Pathologies Using Fully Convolutional Deep Neural Network <i>Maryam Badar Muhammad Moazam Fraz Muhammad Shahzad</i> <i>Proceedings of the Medical Image Understanding and Analysis 2018 , res.country(231,)</i> Citations: 14 DOI: 10.1007/978-3-319-95921-4_29	2018

Book Chapters

Simultaneous Segmentation of Multiple Retinal Pathologies Using Fully Convolutional Deep Neural Network <i>M. Bader Muhammad Shahzad Muhammad Moazam Fraz</i> In: <i>Medical Image Understanding and Analysis in Communications in Computer and Information Science</i> , vol 894. Springer, Cham NULL Citations: 21 DOI: 10.1007/978-3-319-95921-4_29	2018
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Editorial Activities

Reviewed Papers for Journals	2018
Reviewed Papers for Journals	2018
Reviewed Papers for Journals	2018

Intellectual Property

Copyrights

StreamFace: A framework for extraction of face datasets from YouTube videos and livestreams Status: Filed	2023
Live News Channels Stream Analytics Framework Status: Granted Filed	2022
Orientation aware weapons detection in visual data Status: Filed	2021
Informative Attention Based Person Re-Identification for automated surveillance Status: Filed	2021
An Attention based Distance Regression CNN for Nuclei Instance Segmentation and Type Classification in Digitized Histology Images Status: Filed	2021

Patents

Improving Image Super Resolution using Squeeze-and-Residual-Excitation with Holistic Attention in Deep Neural Networks Status: Filed	2021
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Industrial Designs

Trademarks