


Resume			
Name (in block letters)	DR. WAHEED NOOR		
Designation	<u>Associate Professor (Tenured)</u> , Department of Computer Science, University of Balochistan, Quetta, Pakistan. Additional Responsibility: <u>Director</u> , Government Innovation Lab (GIL), University of Balochistan, Quetta, Pakistan. <u>Director</u> , Center of Excellence for Results Based Management (CERBM), University of Balochistan, Quetta, Pakistan. Founding & Former <u>Director</u> ORIC, UoB, Quetta, Pakistan. Founding & Former <u>Director, (Technical)</u> , Directorate of Distance Education, UoB, Quetta, Pakistan.		
Department	Computer Science & Information Technology		
Faculty	Management Science, Business and Information Technology		
Phone/Cell No	+92333-7837101		
Email Address	waheed.noor@um.uob.edu.pk a.waheed.noor@gmail.com		
Qualification	PhD in Computer Science (Machine Learning) from Asian Institute of Technology, Thailand, 2013		
Experience	Pre-PhD: <u>24 days/6 Months/8 years (25/5/2005-19/12/2013)</u> Post-PhD: <u>23 days/7 Months/11 years (20/12/2013-12/08/2025)</u> Total: <u>17 days/2 Month/20 years</u>		
Language Proficiency	English: Read, Write, Speak and Understand Urdu: Read, Write, Speak and Understand Pashto: Read, Speak and Understand Brohi: Speak and Understand		

Tenure Highlights

- Conferred the ***APO National Award 2024*** in the Productivity Advocates category in recognition of significant contributions as a thought leader, strategist, and policy maker. This award acknowledges Dr. Waheed Noor's leadership in advancing productivity initiatives at both organizational and national levels, including shaping agendas, formulating policies and frameworks, and mobilizing resources for implementation.
- Established **6** prominent Centers/Labs including:
 - Office of Research Innovation and Commercialization-UoB "***Cultivating ideas shaping tomorrow: ORIC where vision becomes reality***"
 - Government Innovation Lab-UoB "***Creating civic and social impact through Innovation***"
 - Center of Excellence for Results Based Management-UoB "***Promoting Results based Management in the Public sector***"
 - TISC "***Empowering Innovation, Enriching Futures:TISC igniting technological brilliance at UoB***"
 - National Incubation Center-UoB/BIC "***Nurturing dreams Fostering innovators, NIC fueling progress at UoB***"

- Directorate of Distance Education-UoB “*Connecting minds bridging distances, DDE pioneering quality education on 21st Century University Model at Balochistan*”, fostering a dynamic environment for cutting-edge research and innovation.
- Spearheaded the launch of the SDG Challenge Cup in **2020** and **2021** to cultivate a thriving entrepreneurial ecosystem in Balochistan while driving innovation, fostering lasting economic influence, supporting local startups, gaining global acclaim, and providing essential networking and funding avenues.
- Led R&D projects totaling a cumulative worth of PKR **413** Million, fostering innovation and contributing to the advancement of diverse sectors.
- Received PKR **48** Million government grant for two startups as co-founder of “Gul Technology (Pvt) Ltd” and “Smart Water Quality Monitoring System”.
- Filed **1** patent and **2** Patent Ready for Filling. Furthermore, facilitated the signing of a license agreement for the commercialization of a product, contributing to the UoB's innovation portfolio
- Led the development of **20+** RBM-based ICT smart innovative products using state-of-the-art technologies such as AI, Robotics, GIS and Web as per governmental and societal needs
- Accelerated the growth of **100** local startups and **10+** research grants with a distinct SDG focus, contributing to the local entrepreneurial ecosystem.
- Spearheaded **17** RBM-oriented research studies and conducted **6** extensive surveys in Balochistan, generating valuable insights for evidence-based decision-making and enabling digitalization.
- Nurtured the capabilities of **232** instructors on distance education mode, **150+** freelancers, **52** interns, **50** next-generation tech developers, trained **25** entrepreneurs of Gwadar, **300** Freelancers trained through support to Digiskills, Digibizz and NFTP programs, and engagement of **500** individuals across **33** districts in R&D projects illustrate a commitment to knowledge dissemination and economic development. The freelancing program led by Dr. Waheed Noor resulted in cumulative earnings surpassing **\$100,000** (within 2 years) from freelancing activities undertaken by the participating freelancers.
- The GIL cost-to-investment raised ratio is **50** Million to **110** Million PKR, that is for every Million spent on GIL, it resulted in raising **2.2** Million.
- As a distinguished HEC-approved PhD Supervisor, Dr. Noor is nurturing the next generation scholars through mentorship of **12** research scholars including **11** MS students and one co-supervision of first ever PhD (CS) graduate of Balochistan.
- Published **13** impact factor articles at international renowned venues.
- Contributed in Examination System Revamp, review and revision of MS and PhD Semester System rules, establishment of Graduate Studies Office and Under-Graduate Studies Office at University of Balochistan
- Established over **30** linkages with governmental departments and renowned international organizations such as the World Bank, FAO, UNDP, UNICEF, IoM, UNHCR, ILO, UNFPA, IDO, ITC, GRASP, GPP, CAR and EU HEI's facilitating cross-border collaboration and knowledge exchange.
- Collaborated with **25**-line departments of government of Balochistan to cultivate an innovation ecosystem conducive to research and development for the public sector development.
- Organized the largest R&D event of Balochistan, *Annual Invention to Innovation Summit* Balochistan (**2016 to 2019**), attracting widespread participation from educational institutions (**100** schools, **100** Colleges and Universities from all over Pakistan), **50+** industry partners, **67** renowned key note speakers and featuring impressive displays of **100** School science projects, **300** prototype and poster display.
- Co-organized the first-ever Livestock Expo in Balochistan at the University of Balochistan, promoting the livestock and dairy sector technologies.
- Instrumental in initiatives such as the University of Balochistan Research Fund (UBRF), Advanced Increment for fresh PhDs appointment, NFTP, and DigiBizz Program, driving the institution towards greater research excellence and innovation.
- Received an Appreciation Award at the Interprovincial Science Fair **2014**, presented by Intel Corporation and the Pakistan Science Foundation, in recognition of his remarkable innovative ideas
- Received the Best IT Innovation Award in **2016** for his impactful work and the significant role he has played in driving productivity and innovation at the organizational level.

1. RESEARCH PROJECTS & LINKAGES

A. Patents

Title	Date	National/Int.	Status	Role
Eye Smart Helmet	15-03-2022	National (Pak)	Filed	Co-Inventor

B. Research Projects in Primary Domain (ICT)

Title	Donor	Amount (PKR)	Date	Status	Role/ Contribution
Recasting best practices of European universities during pandemic for Improving online education in Pakistan HEIs	European Commission	257 Million	October, 2022 – October, 2025	On-Going	Focal Person of National Partner/Affiliated University
Development, supply and deployment of 150 smart helmet for the safety of coal mine workers from Toxic and explosive gas	Colleges, Higher and Technical Education Département, GoB	80 Million	July, 2024 - June, 2025	On-Going	Principal Investigator
To develop and pilot 10 smart indigenous low cost IoT based Air Quality Monitoring kits in Quetta	Balochistan Environmental Protection Agency	8 Million	July, 2024 - June, 2025	On-Going	Principal Investigator
GIL Smart Projects and Fellowship Program	P&DD, GoB	15 Million	April, 2024 -June, 2025	On-Going	Principal Investigator
Smart Water quality Monitoring Kit product development and commercialization	Pakistan Innovation Fund, Planning Commission	20 Million	June, 2023- June, 2025	On-Going	Principal Investigator
Development of web-based dashboard at Balochistan Bureau of Statistics (BBoS) to strengthen monitoring and reporting of SDGs in Balochistan	UNDP, Balochistan	2.16 Million	15 th May, 2023-30 th June, 2023	Completed	Principal Investigator
GIL Smart Projects and Fellowship Program	P&DD, GoB	20 Million	July-2022- June-2023	Completed	Principal Investigator
Commercialization of Eye Smart Helmet for the Safety of Mines Workers in the Coal Mines Environment	Pakistan Science Foundation	14 Million	May, 2024- April-2026	Ongoing	Principal Investigator
Geo-tagging of immovable public assets with Property assessment Survey of whole Balochistan	Governance and Policy Project (GPP), Balochistan	79.15 Million	September, 2020-June-2022	Completed	Principal Investigator
Human Resource Information Management System for Health	Governance and Policy	5.18 Million	July, 2021- May, 2022	Completed	Principal Investigator

Department, Government of Balochistan	Project (GPP), Balochistan				
Complaint Management Information System	Governance and Policy Project (GPP), Balochistan	1.74 Million	March, 2022-June, 2022	Completed	Principal Investigator
Face recognition-based attendance system	GoB	10 Million	March, 2021-June, 2021	Completed	Principal Investigator
Smart vehicle counting and alert system	GoB		March, 2021-June, 2021	Completed	Principal Investigator
Smart garbage reporting and management system	GoB		March, 2021-June, 2021	Completed	Principal Investigator
Smart environment monitoring system	GoB		March, 2021-June, 2021	Completed	Principal Investigator
Seven degree of freedom robot	GoB		March, 2021-June, 2021	Completed	Principal Investigator
Eye Smart Helmet	HEC-TDF-03	14 Million	October, 2020-March, 2021	Completed	Principal Investigator
Digital archival management system	Governance and Policy Project (GPP), Balochistan	1.6 Million	October, 2020-March, 2021	Completed	Principal Investigator
Centralized Website and Students Enrollment System	Colleges Higher & Technical Education Department, Government of Balochistan and UNDP	1.95 Million	June, 2020-December, 2021	Completed	Principal Investigator
Development of HRMIS & Geo Tagging System for QDA	Quetta Development Authority and UNDP	1.88 Million	June, 2020-December, 2021	Completed	Principal Investigator
Human Resource Information Management System for Planning & Development Department, Government of Balochistan	Governance and Policy Project (GPP), Balochistan	2.3 Million	November, 2019-January, 2021	Completed	Principal Investigator

Development of HRMIS for Quetta WASA	Quetta Water & Sanitation Authority and UNDP	3.05 Million	July, 2019-December, 2021	Completed	Principal Investigator
Balochistan Agriculture Marketing Information System	FAO-UN	0.8 Million	December-2016	Completed	Principal Investigator

C. Research and Development Projects in Public Sector Strengthening and Human Capital Development

Title	Donor	Amount (PKR)	Date	Status	Role/Contribution
To assess health status and prevalence of Gender-Based Violence (GBV) among Afghan Refugees residing in Refugees camps across Balochistan	Commissionerate for Afghan Refugees (CAR), Balochistan	7.52 Million	30 th December, 2024-6 th March, 2025	Completed	Team Lead
Research on market dynamics and livelihood interventions: analyzing Labour markets and value chains in Balochistan	International Organization for Migration	6.53 Million	13 th November, 2024-13 th February, 2025	Completed	Team Lead/ Data Analyst
To conduct Training Needs Assessment, Develop Training Material and Facilitate Training on Gender Equality in the World of Work in Pakistan	International Labour Organization	4.5 Million	19 th February, 2024-15 th December, 2024	Completed	Team Lead
Written translation of the questionnaires for Turkmenistan from English into Balochi language	International Labour Organization	0.16 Million	7 th August, 2024-18 th August, 2024	Completed	Team Lead
Imparting customized Training under the umbrella of PFM for officials of Government of Balochistan (Grade 9-16)	Governance and Policy Project (GPP), Balochistan	1.4 Million	22 nd May, 2023-15 th June, 2023	Completed	Team Lead
Documentary development for digital launch of 7 research reports of GoB	UNDP, Balochistan	0.6 Million	December-2022-March-2023	Completed	Team Lead
Gender Based Analysis of Government Departments and Women Empowerment Baseline survey in Balochistan	Governance and Policy Project (GPP), Balochistan	15 Million	September, 2021-October, 2022	Completed	Team Lead
Capacity Needs Assessment of Beneficiary Departments (Excise, Taxation, And Anti-Narcotics, Balochistan Public Procurement Regulatory Authority, Balochistan	Governance and Policy Project (GPP), Balochistan	15.6 Million	September, 2021-October, 2022	Completed	Team Lead

Revenue Authority, Board of Revenue Balochistan, Provincial Ombudsman, Ombudsperson Against Anti-Harassment of Women at Workplace in Balochistan, Women Development Department, Anti-Corruption Establishment Balochistan)					
Impact evaluation of Balochistan Education Support Program	Governance and Policy Project (GPP), Balochistan	1.8 Million	March, 2021- June, 2021	Completed	Team Lead
Impact evaluation of Expended Program on Immunization (Household and Professional staff Survey)	Governance and Policy Project (GPP), Balochistan	1.8 Million	December, 2020- February, 2021	Completed	Team Lead
Beneficiary Service Satisfaction Survey	Governance and Policy Project (GPP), Balochistan	4.4 Million	September, 2020-March, 2021	Completed	Team Lead
Impact evaluation of Six Flood Dispersal Structure on Nari River	Governance and Policy Project (GPP), Balochistan	1.8 Million	September, 2020- February, 2021	Completed	Team Lead
Training Needs Assessment of Mines and Minerals Department, GoB	Governance and Policy Project (GPP), Balochistan	1.2 Million	September, 2020- March, 2021	Completed	Team Lead
Capacity Need Assessment (CNA) of Statistical Institutions for the implementation of 2030 Agenda (SDGs) in Balochistan	UNDP, Balochistan	1.3 Million	September, 2020- December, 2020	Completed	Team Lead
Contextualizing Sustainable development in normative framework of Islamic tradition; Consultation with Madras teachers in Balochistan	UNDP, Balochistan	0.6 Million	September, 2020- December, 2020	Completed	Team Lead
Baseline Survey for Growth for Rural Advancement and Sustainable Program (GRASP)	FAO, Balochistan & Agriculture Department, GoB	3.8 Million	January, 2020- April, 2020	Completed	Team Lead
GRASP COVID-19 Business Impact Survey-2020	European Union and	0.7 Million	March, 2020	Completed	Team Lead

	International Trade Center				
Assessment of Capacity building program of IT and Computer professionals in Balochistan	UNDP , Balochistan	1 Million	February-2020-March-2020	Completed	Team Lead
Establishment of welfare center for She male citizens	UNDP , Balochistan	1 Million	January, 2020-February-2020	Completed	Team Lead
Household Solid waste disposal Survey	UNDP , Balochistan	1 Million	December, 2019-January, 2020	Completed	Team Lead
Baseline Survey of THAZA project	FAO, Balochistan & Agriculture Department, GoB	2.9 Million	January, 2019-March, 2019	Completed	Team Lead
Baseline and End line survey of AusBBA-II and WEE Project	FAO, Balochistan & Agriculture Department, GoB	1.96 Million	March, 2017-May, 2017	Completed	Team Lead

D. Linkages & Collaboration

Institute/ Lab	Type	Period	Status
Commissionerate for Afghan Refugees (CAR), Balochistan Dated: 30th December, 2024	MoU: survey to assess health status and prevalence of Gender-Based Violence (GBV) among Afghan Refugees residing in Refugees camps across Balochistan	Ongoing	Continue
Associates in Development (Pvt.) Ltd Dated: 16 th March, 2023	Cooperation in all areas of mutual interest to jointly pursue emerging consulting opportunities	Ongoing	Continue
Momentum Ventures (Pvt) Ltd Dated: 1 st November, 2022	LoU: PP2021-2022/Consulting/21 for GLLSP-II, 2022	Assignment based	Completed
Momentum Ventures (Pvt) Ltd Dated: 15 th August, 2022	LoU: Development of Balochistan Local Government and Rural Development Sector Plan (LGRD-SP)	Assignment based	Completed
PITB: Punjab Information Technology Board Dated: April 22 nd , 2021	MoU: Joint partnership for Technology Incubator Project to accelerate the successful development of business startups.	Three Years	Intact
Excellence Delivered ExD Pvt. Ltd. SAP Platinum partner Dated: 9 th February, 2018	MoU: establishing delivery unit for SAP learning edition on subsidized rates for students of UoB	Three Years	Intact
FAO of UN: 31 st December, 2016-15 th May, 2019	Support letter: Project execution: Improved multiclass classification of spatial data for Agriculture using Machine Learning Techniques	Eighteen Months	Intact

IDEAGIST Pakistan Dated: 25 th September, 2018	MoU: Free online virtual incubation platform for students of UoB	Three Years	Intact
EDVON-Learn & Innovate in Pakistan Dated: 31 st August, 2018	MoU: To train students of UoB on robotics and other such kits	Three Years	Intact
Food and Agriculture Organization of United Nations	LoA: Baseline and Endline survey of AusABBA II and WEE Project	Three Months	Completed
Institute of Research Promotion, Lahore	Tech Hub: A unique web portal for connecting industries to academia through sharing problems by industry and solutions from academia (http://portal.irp.edu.pk)	--	Continue
ISRA University, Hyderabad	Academic linkage through exchange and cooperation in education and research between the two institutions through mutual assistance of their staff, faculty members and departments	Three years	Continue
Food and Agriculture Organization of United Nations	LoA: Research and Development of Agriculture Marketing Information System (AMIS) for Agriculture Department, GoB	Three Months	Completed
National Council for Physics, Islamabad Dated: 30 th July 2016	MoU: Research and Development, Student & Faculty exchange, Lab Facilities	Five Years	Completed

2. RESEARCH SUPERVISION

A. M. Phil. / M.S

Student Name	Contribution	Thesis Title	Date	Status
Ali Gul	Supervisor	Learning predictive models for coal mines environment using smart helmet sensor data	2018	Degree Awarded
Faisal Ahmed	Supervisor	Deep learning approach for vegetation cover classification from satellite images	2018	Degree Awarded
Mr. Bakht Muhammad	Supervisor	Speech signal denoising using advanced diffusion techniques	2022	Synopses Approved
Sahrish Butt	Co-Supervisor	Semantic similarity-based food entities recognition using wordnet	2018	Degree Awarded
Zarmeena Jaffar	Supervisor	Predictive Human Resource Analytics using Data Mining	2017	In Progress, 1 Paper Published Thesis Ready
Muhammad Ali	Co-Supervisor	Predicting activities of P2P IPTV users for improved design and management of the overlay	2016	Degree Awarded
Sikandar Shehzad	Co-Supervisor	A synthetic Model for P2P IPTV users	2015	Degree Awarded
Rizwan Asghar	Supervisor	Efficiency of Machine Learning algorithms in learning behavior of P2P IPTV users	2015	Degree Awarded

Muhammad Atif Naseem	Supervisor	Improved Multi-Class Classification of Vegetation Cover from Remotely Sensed Data Using Machine Learning	2015	Degree Awarded
Saiqa Gul	Supervisor	Predicting & Evaluating Student Performance Based on Intelligent Tutoring System Log	2014	Degree Awarded

B. Ph.D.

Scholar Name	Contribution	Thesis Title	Date	Status
Muhammad Javed Iqbal	Co-Supervisor	Learning user behavior in P2P IPTV streaming	2017	Degree Awarded
Muhammad Atif Naseem	Supervisor	Building Advanced Deep Geospatial Learning Models for Cocoa Tree Disease Detection and Sustainable Farming Optimization.	2021	Synopsis Defended

3. PUBLICATIONS/ CONFERENCES

A. Impact Factor Journals

Journals	Title	Volume	Date	IF	Publisher	Author	DoI
Computers in Biology and Medicine	Learning from the few: Fine-grained approach to pediatric wrist pathology recognition on a limited dataset	181 (1) & 109044	2024/10/1	7.0	Pergamon	Ammar Ahmed, Ali Shariq Imran, Zenun Kastrati, Sher Muhammad Daudpota, Mohib Ullah, Waheed Noor	https://doi.org/10.1016/j.compbiomed.2024.109044
SN Computer Science	Cross Classification Matrix to Evaluate the Performance of Machine Learning Algorithms in Predicting Students Performance of Developing Regions	5 (5) & 621	2024/6/6	3.78	Springer Nature Singapore	Imam Dad, Jianfeng He, Waheed Noor , Abdul Samad, Ihsan Ullah, Samina Ara	https://doi.org/10.1007/s42979-024-02909-y
Computers, Materials & Continua	A Semi-supervised Approach for Aspect	77(1) & 115-137	2023/10/31	3.1	Tech Science Press	Bishrul Haq, Sher Muhammad Daudpota, Ali Shariq Imran,	https://doi.org/10.32604/cmc.2023.040638

ISSN: 1546-2218	Category Detection and Aspect Term Extraction from Opinionated Text					Zenun Kastrati, and Waheed Noor	
Intelligent Automation & Soft Computing ISSN:1079-8587(print)	Baseline Isolated Printed Text Image Database for Pashto Script Recognition.	37(1) & 875-885	2023/7/1	2.0	Tech Science Press	Arfa Siddiqu, Abdul Basit, Waheed Noor , Muhammad Asfandiyar Khan, M Saeed H Kakar, Azam Khan	10.32604/iasc.2023.036426
Computers, Materials & Continua ISSN: 1546-2218	Machine Learning-based Stable P2P IPTV Overlay.	71(3) & 5381-5397	2022/6/01	3.1	Tech Science Press	Muhammad Javid Iqbal, Ihsan Ullah, Muhammad Ali, Atiq Ahmed, Waheed Noor , Abdul Basit	10.32604/cm.c.2022.024116
Wireless Communications and Mobile Computing ISSN:1530-8677	Behavior Dissection of NGWN Live Audio and Video Streaming Users with Enhanced and Efficient Modelling	2022, 1-12	2022/3/30	2.336	Hindawi	Asia Ali, Ihsan Ullah, Atiq Ahmed, Waheed Noor , Ahthasham Sajid, Inam Ullah Khan	10.1155/2022/7564543
Peer-to-Peer Networking and Applications ISSN: 1936-6442	Towards intelligent P2P IPTV overlay management through classification of peers	15(1), 827-838	2022/1/5	4.2	Springer New York	Muhammad Ali, Rizwan Asghar, Ihsan Ullah, Atiq Ahmed, Waheed Noor , Junaid Baber	https://doi.org/10.1007/s12083-021-01288-y
Journal of Intelligent and Fuzzy Systems ISSN: 1064-1246	Semantic similarity-based food entities recognition using wordnet	43(2) & 2069-2078	2022/6/09	1.739	IOS Press	Sahrish Butt, Maheen Bakhtyar, Waheed Noor , Junaid Baber, Ihsan Ullah, Atiq Ahmed, Abdul Basit, M Saeed H Kakar	10.3233/JIFS-219306
Journal of Intelligent and Fuzzy Systems	Extended framework for Sindhi Numerals OCR	43(2), 2045-2056	2022/6/09	1.739	IOS Press	Anwar Ali Sanjrani, Junaid Baber, Maheen Bakhtyar, Ihsan	10.3233/JIFS-219304

ISSN: 1064-1246	using Gradient Orientation Histograms					Ullah, M Shumail Naveed, Waheed Noor , Abdul Basit, Azam Khan, Naveed Sheikh	
Journal of Intelligent and Fuzzy Systems ISSN: 1064-1246	Brain Tumor detection in MRI scans using single shot multi-Box detector	43(2), 1985-1993	2022/6/09	1.739	IOS Press	Naseer-u-Din, Abdul Basit, Ihsan Ullah, Waheed Noor , Atiq Ahmed, Naveed Sheikh	10.3233/JIFS-219298
Computer Modeling in Engineering and Sciences ISSN: 1526-1492	Sentiment analysis of roman urdu on e-commerce reviews using machine learning	131, 1263-1287	2022/1/1	2.4	Tech Science Press	Bilal Chandio, Asadullah Shaikh, Maheen Bakhtyar, Mesfer Alrizq, Junaid Baber, Adel Sulaiman, Adel Rajab, Waheed Noor	10.32604/cm es.2022.019535
Information processing and Management (Elsevier) ISSN:0306-4573	Extractive text summarization models for urdu languages	57(6), 102383	2020/11/1	6.222	Elsevier	Ali Nawaz, Maheen Bakhtyar, Junaid Baber, Ihsan Ullah, Waheed Noor , Abdul Basit	https://doi.org/10.1016/j.ipm.2020.102383
IEEE Transactions on Knowledge and Data Engineering ISSN: 1041-4347	Learning predictive choice models for decision optimization	26(8), 1932-1945	2014/7/8	8.9	IEEE	Waheed Noor , Matthew N Dailey, Peter Haddawy	10.1109/TKDE.2013.173

B. HEC Recognized/ Non-Recognized Journals/ Books

Journals	Title	Volume	Date	IF	Publisher	Author	DoI
Pakistan Journal of Emerging Science and Technologies (PJEST) ISSN 2788 – 8630 (On-Line)	Vegetation and Non-Vegetation Classification using Object Detection Techniques and Deep Learning from Low/Mixed Resolution	4(4)	2023/12/30	Y	CC(BY-SA)	Faisal Ahmed, Waheed Noor , Mohammad Atif Naseem, Ihsanullah, Abdul Basit	https://doi.org/10.58619/pjest.v4i4.152

	Satellite Images: Vegetation and Non-Vegetation						
Pakistan Journal of Emerging Science and Technologies (PJEST) ISSN 2788 – 8630 (On-Line)	Evaluation of face detectors for face recognition	3(2), 1-10	2022/1/1	Y	CC(BY-SA)	Muhammad Zain Abbas, Junaid Baber, Maheen Bakhtyar, Ihsan ullah, Waheed Noor	https://doi.org/10.58619/pjest.v3i2.77
Engineering, Technology & Applied Science Research ISSN: 2241-4487	Predicting the session of an P2P IPTV user through Support Vector Regression (SVR)	10(4), 6021-6026	2020/8/16	Y	D. G. Pylarinos	Muhammad Ali, Ihsan Ullah, Waheed Noor , Ahthasham Sajid, Abdul Basit, Junaid Baber	https://doi.org/10.48084/etasr.3635
arXiv preprint arXiv:2106.06720 ISSN: 2331-8422	BIOPAK Flasher: Epidemic disease monitoring and detection in Pakistan using text mining	1	2021/6/12	--	PRE-PRINT Cornel Tech	Muhammad Nasir, Maheen Bakhtyar, Junaid Baber, Sadia Lakho, Bilal Ahmed, Waheed Noor	https://doi.org/10.48550/arXiv.2106.06720
Proceedings of International Conference on Computing, Electronic and Electrical Engineering (ICE Cube) 2021	Learning Predictive Models for Underground Coal Mine Environment Using Sensor Data	1, 1-6	2021/10/26	--	IEEE	Ali Gul, Waheed Noor , Junaid Babar, Ali Nawaz, Syed Owais Athar	10.1109/ICECube53880.2021.9628259
Advances in Information and Communication: Proceedings of the 2019 Future of Information and Communication	Facial expression recognition and analysis of interclass false positives using CNN	46-54	2020	--	Springer International Publishing	Junaid Baber, Maheen Bakhtyar, Kafil Uddin Ahmed, Waheed Noor , Varsha Devi, Abdul Sammad	https://doi.org/10.1007/978-3-030-12385-7_5

n Conference (FICC), Volume 2 ISBN: 978-3-030-12384-0							
2016 International Conference on Computing, Electronic and Electrical Engineering (ICE Cube) ISBN: 978-1-5090-1252-7	Handwritten optical character recognition system for Sindhi numerals	262-267	2016/4/11	--	IEEE	Anwar Ali Sanjrani, Junaid Baber, Maheen Bakhtyar, Waheed Noor , Muhammad Khalid	10.1109/ICECUBE.2016.7495235
International Journal of Computer Networks and Communications Security ISSN 2410-0595	Challenges for a Global Solution Addressing quality of Service problem in P2P IPTV System	3(12), 432–437	2015/12/2	---	Dorma Trading Est	Ihsan Ullah, Waheed Noor , M Javid Iqbal Khan, Junaid Baber, Atiq Ahmed	chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ijcncs.org/published/volume3/issue12/p1_3-12.pdf

C. Conferences/ Workshops Organized/Participated

Authors	Conferences/Workshop	Date	Role
Waheed Noor	National Computing Education Accreditation Council, Higher Education Commission (NCEAC-HEC) Program “The art of teaching programming and quality of IT Graduates Academia, and Industry”	6 th August, 2025	Invited Speaker
Waheed Noor	Workshop on Capacity Building in online education at Sukkur IBA University	28 th February, 2025	Focal Person
Waheed Noor	4 th International Conference on Knowledge-Based Textiles (ICKT2025), National Textile University, Faisalabad	19 th -20 th February, 2025	Invited Speaker
Waheed Noor	QDC-1: Qualifications Developing in Digital and High-Tech Skills - TVET Sector Support Program (EU TVET IV) at IMS Peshawar	16 th - 20 th December, 2024	Domain Expert
Waheed Noor	Kick-off workshop with universities from Baluchistan, Khyber Pakhtunkhwa, Islamabad Capital Territory (ICT), and Sindh by IoM Country Office	3 rd - 4 th October, 2024	Team Leader/Data Analyst

Waheed Noor	One day seminar on improving teaching methodologies through ICT based solutions with lessons learned from the visit of Sapienza University of Rome under the project RAPID: Recasting best practices of European universities during pandemic for Improving online education in Pakistan HEIs	20 th September, 2024	Keynote Speaker
Waheed Noor	Workshop on Artificial Intelligence, GPT (Generative Pre-Trained Transformer) and White Collar Crime Investigation-New Dimensions for NAB Officers, Balochistan, GoP	24 th May, 2024	Resource Person
Waheed Noor	Research and Evaluation Workshop and Dissemination Event, UNICEF Islamabad	21 st – 23 rd May, 2024	Participant
Waheed Noor	Two-day training on gender mainstreaming into policies for supporting Women SME's in agriculture and livestock value chains	5 th - 6 th March, 2024	Participant
Waheed Noor	2 nd quarterly Community Resilience Activity (Flood Recovery) Strategy Workshop and Roadmap for Balochistan	24 th -26 th January, 2024	Participant
Waheed Noor	Workshop on <i>Improving your learning and efficiency through Generative AI</i>	16 th January, 2024	Chief Organizer
Waheed Noor	National Partners of Erasmus+ Project Meeting at University of Baltistan	7 th -10 th August, 2023	Member
Waheed Noor	Pakistan Governance Forum: Innovation & E-Governance	25-26 th July, 2023	Guest Speaker/Moderator
Waheed Noor	Premier of Innovation Hub	13 th July, 2023	Presenter
Waheed Noor	Balochistan Governance and Policy Project Workshop	23 rd June, 2023	Presenter
Waheed Noor	Pakistan Innovation Fund Elevator Pitch	14 th June, 2023	Presenter
Waheed Noor	Five-day training on Financial Management for Junior Officials of Balochistan	29 th May, 2023- 2 nd June, 2023	Chief Organizer
Waheed Noor	Two-day training on HRMIS for Health Department, GoB	19 th - 20 th May, 2023	Chief Organizer
Waheed Noor	Workshop on Geo tagging of Immovable Public Assets and using Geo-data for effective Public Investment planning in Balochistan	8 th May, 2023	Guest Speaker
Waheed Noor	Workshop on Public Financial Management (on use of Spatial Data	13 th – 17 th March, 2023	Resource Person

	for effective planning and management)		
Waheed Noor	1 st Meeting of Technical Advisory Committee NHDR 2023 on Digital Transformation	14 th February, 2023	Member
Waheed Noor	Dissemination Workshop of Gender Based Policy Analysis of Government Departments and Women's Empowerment Situation Analysis of Balochistan	22 nd September, 2022	Chief Organizer
Waheed Noor	Consultative Feedback and validation workshop on Gender Based Analysis	23 rd June, 2022	Chief Organizer
Waheed Noor	Pakistan Science Expo-2022	28 th -29 th January, 2022	Presenter
Waheed Noor	Two-day Training of Young Professionals on Geotagging and Property Assessment Survey (Batch-5)	22 nd -23 rd January, 2022	Chief Organizer
Waheed Noor	SDG Challenge Cup 2021	October-December, 2021	Chief Organizer
Waheed Noor	Two-day Training of Young Professionals on Geotagging and Property Assessment Survey (Batch-4)	13 th -14 th December, 2021	Chief Organizer
Waheed Noor	Two-day Training of Young Professionals on Geotagging and Property Assessment Survey (Batch-3)	27 th -28 th November, 2021	Chief Organizer
Waheed Noor	Two-day Training of Young Professionals on Geotagging and Property Assessment Survey (Batch-2)	22 nd -23 rd October, 2021	Chief Organizer
Waheed Noor	2021 International Conference on Computing, Electronic and Electrical Engineering (ICE Cube)	September, 2021	Paper Presenter
Waheed Noor	Training of Young Professionals on Impact Evaluation of Balochistan Education Support Program	23 rd August, 2021	Chief Organizer
Waheed Noor	Two-day Training of Young Professionals on Geotagging and Property Assessment Survey (Batch-1)	28 th -29 th July, 2021	Chief Organizer
Waheed Noor	Training of Young Professionals on Impact Evaluation of Expanded Program on Immunization	24 th May, 2021	Chief Organizer
Waheed Noor	Two-day Hands-on Practice on usage of HRMIS for P&DD, GoB staff	27 th -28 th April, 2021	Chief Organizer
Waheed Noor	Citizen's pre-budget consultative workshop	13 th April, 2021	Chief Organizer

Waheed Noor	Citizen's pre-budget consultative workshop	5 th April, 2021	Chief Organizer
Waheed Noor	Training of Young Professionals on Beneficiary Service Satisfaction Survey	6 th January, 2021	Chief Organizer
Waheed Noor	Balochistan SDG Challenge Cup-2020	23 rd December, 2020	Chief Organizer
Waheed Noor	Design Thinking Workshop 2020	17-18 th December, 2020	Chief Organizer
Waheed Noor	Evidence based Program design	30 th November- 3 rd December, 2020	Participant
Waheed Noor	Workshop on Artificial Intelligence for BS students of Divisional Public School and College, Faisalabad	16 th December, 2019	Guest Speaker/Resource Person
Waheed Noor	Balochistan Livestock Expo-2019	18-20 th November, 2019	Co- Organizer
Waheed Noor	4 th Invention to Innovation Summit, Balochistan-2019	24-25 th September, 2019	Chief Organizer
Waheed Noor	Pakistan Startup Cup 2018-2019	2018-2019	Mentor
Waheed Noor	International Conference on Pharmaceutical Sciences, 2018	26-27 th September, 2018	Participant
Waheed Noor	Undergraduate Research Colloquium (URC), BUITEMS	12 th July, 2018	Guest of Honor
Waheed Noor	3 rd Invention to Innovation Summit, Balochistan-2018	25-26 th April, 2018	Chief Organizer
Waheed Noor	Multidimensional Poverty in Pakistan, UNDP Funded	26-30 th March, 2018	Participant
Waheed Noor	One day national seminar on perspective role of university graduates in community development, HEC Funded	2018	Chief Organizer
Waheed Noor	5-day training of Coordinators for BS-4-year program	18 th -22 nd September, 2017	Panelist
Waheed Noor	2 nd Invention to Innovation Summit, Balochistan-2017	25-26 th April, 2017	Chief Organizer
Waheed Noor	Project Formulation Workshop	2017	Organizer
Waheed Noor	Best IT Innovation award	19-21 st December, 2016	1 st Runner up
Waheed Noor	One day seminar on Food safety: out national responsibility	3 rd December, 2016	Participant
Waheed Noor	Training Session on Become employable	October, 2016	Participant
Waheed Noor	International symposium on Higher Education initiatives for Entrepreneurship and career services	October, 2016	Participant
Waheed Noor	One day consultative workshop on Policies for commercialization of Research	5 th May, 2016	Participant
Waheed Noor	1 st Invention to Innovation Summit, Balochistan-2016	4-5 th May, 2016	Chief Organizer

Waheed Noor	1 st international conference on Trends and Innovation in Information Technology	24-26 th February, 2016	Keynote speaker
Waheed Noor	Policies for creating enabling environment for encouraging problem-solving research	4 th June, 2015	Organizer
Waheed Noor	Industry driven technologies	14 th April, 2015	Organizer

4. ADMINISTRATION/ADVISORY SERVICES

Role/ Responsibility	Department/ Section	Duration/ Date
Director	Center of Excellence for Results Based Management, University of Balochistan (CERBM, UoB)	13 th October, 2021-to date
Director/Team Lead	Government Innovation Lab, University of Balochistan (GIL, UoB)	13 th October, 2021-to date
Director (Technical)	Directorate of Distance Education, University of Balochistan (DDE, UoB)	15 th September, 2015-31 st December, 2021
Director	Office of Research Innovation and Commercialization, University of Balochistan (ORIC, UoB)	21 st October, 2014 – 2021-12 th October, 2021
Member	Technical Committee for Development Scheme “Quetta Master Plan”, 2024.	23 rd October, 2024
Member	Think Tank for Government of Balochistan, Governance, Development, Policy Making, Public Sector development challenges, 2023.	7 th February, 2023
Member	Technical Advisory Committee, UNDP National Human Development Report 2023 “Digital Transformation”.	29 th November, 2022
Chairperson	Monitoring & Implementation Committee for MoU with S&IT, GoB for DIGIBIZZ, NFTP, PITB, HEC & establishing freelancing training delivery center, Business Incubation Center.	18 th November, 2020
Chairman	Core Committee for draft Policy on Provincial Higher Education Commission (HEC).	9 th May, 2025
Chairperson	Technical committee for the implementation of HEC ODL policy at University of Balochistan.	10 th January, 2025
Focal Person	Establishment of Software Technology Park at University of Balochistan.	8 th June, 2022
Focal Person	National Program on Idea Bank as City Host and National level event on "Call for Ideas".	2021
Focal Person	Expression of interest to establish National Freelancing Training Center.	30 th December, 2019
Member	Steering Committee for Business Incubation Center (BIC), University of Balochistan.	6 th August, 2025

Member	Committee for establishment of Artificial Intelligence Department at University of Balochistan.	7 th April, 2025
Member	Undergraduate Education Policy (2023-2024) Review Committee.	30 th July, 2025
Member	Linkages Program Committee.	7 th July, 2025
Member	Procurement Committee of Business Incubation Center (BIC), University of Balochistan.	14 th April, 2025
Member	Technical committee for preparation of upcoming meeting with the Governor/Chancellor PSUs, focusing on audit reports and performance review of Vice Chancellors, as per Balochistan Universities Act 2022.	4 th March, 2025
Member	Technical committee for the implementation of HEC "Learning and Skills Enrichment Initiative Pakistan (DLSEI) at University of Balochistan.	20 th January, 2025
Member	Committee for evaluation of proposal regarding Job description and structure of Principle Officers of UoB.	3 rd June, 2024
Subject Expert	Selection Board, University of Gwadar.	4 th January, 2024
Member	Committee to evaluate the short courses for 2024 being offered from TANG Group in partnership with Zhejiang Financial College, China on account of 17 Chinese and Vocational Skills.	10 th October, 2024
Member	Committee to prepare comprehensive plan for financial stability of University of Balochistan.	12 th September, 2024
Subject Expert (AI)	Committee to evaluate the PhD thesis of Faculty of Biological, Pharmaceutical and Health Sciences, UoB.	11 th June, 2024
Member	Committee to evaluate the synopses of various departments/Centers/Institutes of UoB.	11 th June, 2024
Member	Committee to probe the delay in submission of progress reports under National Research Program for Universities (NRPU-HEC).	24 th May, 2024
Member	Committee for the implementation of Higher Education Commission's Career and Internship Framework.	7 th May, 2024
Subject Expert	Selection Board, University of Gwadar.	12 th February, 2024
Member	Committee to take interviews of the interns selected by Ministry of Planning, Development and Special Initiatives, Islamabad.	24 th January, 2024
Member	HEC NRPU Project "Green Synthesis of Nanoparticles and their application for Dye-removal, Photocatalytic activity and Pharmaceutical Wastage removal".	10 th August, 2023

Member	Committee for designing draft ToRs of Sports Board, Sports Gymnasium and UoB Ground.	7 th July, 2023
Member	Committee for designing comprehensive ToRs/Policy for UoBTS, 2023.	27 th February, 2023
Member	Committee to prepare ToRs for newly upgraded Data Entry Operators.	14 th February, 2023
Secretary/ Member	Committee to assess the needs of sanctioned teaching posts in all departments of UoB.	29 th June, 2022
Member	Committee for financial and administrative reforms at UoB.	27 th June, 2022
Member	Committee for the formulation of concrete mechanism to introduce the Central Admission System (CAS).	1 st April, 2022
Member	Redressal of Grievances Committee for redressal of grievances of COMSTECH Associates.	29 th March, 2022
Member	University Scholarship Management Committee.	10 th February, 2022
Member	Project Execution Staff Committee.	16 th July, 2021
Member	Professional accountancy education (CA) implementation Committee to execute MoU with ICAP.	8 th December, 2020
Member	ALP-PARC funded project Purchase Committee.	20 th November, 2020
Member	Advisory Committee for China Study Center.	24 th September, 2020
Member	Improvement of Research Journal Committee.	10 th September, 2020
Member	Committee to prepare criteria for scrutiny/evaluation for position of Lecturer/Assistant Professor.	8 th September, 2020
Member	Committee to decide marks distribution and other university procedures (as per directives of syndicate).	4 th September, 2020
Member	Contractual appointment Review Committee (for retired UoB teachers).	26 th August, 2020
Member	Data Analysis, Projections and Strategy Design support as a think tank to BCOC during COVID19.	1 st May, 2020
Member	Technical Committee for Technical Evaluation of the Bid for Quetta Smart City.	15 th May, 2020
Member	Publication process review and UoB journals upgradation Committee.	8 th January, 2020
Non-voting Member	Syndicate, UoB.	December, 2019
Member	Committee to conduct audit of private affiliated Colleges.	13 th November, 2019
Member	DAC for Department of CS & IT.	8 th October, 2019
Member	Livestock Expo Seminar and Registration Sub-Committee.	4 th October, 2019

Member	Committee to highlight responsibilities of GoB and UoB regarding BS degree Programs in affiliated Colleges.	22 nd September, 2019
Member	Board of Faculty of Basic Sciences.	10 th August, 2019
Focal Person	Working on starting Certificates and Diploma level courses in UoB.	2 nd July, 2019
Member	Provincial Reforms Committee.	3 rd June, 2019
Focal Person	Seminar on Entrepreneurship as viable Carrier by SMEDA.	14 th March, 2019
Chairperson	Remuneration Committee for MS/PhD Bills.	9 th November 2018 – 2020
Participant	Senate functional committee on problems of less developed areas.	24 th December, 2018
Member	Core committee for establishment of Information Technology Park.	19 th April, 2017
Technical Expert	ISO, IEC and OIIML Technical Committee.	13 th March, 2017 – 2021
Member	TTS Committee.	2 nd March, 2015 – 2021
Member DSC (BS/MCS Programs)	Computer Science & Information Technology	May, 2015 – 2021
Member DAC (MS/PhD)	Computer Science & Information Technology	May, 2015– 2021
Subject Expert	Selection Board of University of Turbat.	2016 – 2018
Member	GSO Monitoring Committee.	Mach, 2016 – 2020
Expert Member	NTC for IT.	September, 2016 – 2021
Expert Member	Provincial Committee for ICT.	2 nd March, 2016
Member	USMC, UOB-HEC.	September 2016 – 2021
Non-Voting Member	ASR&B.	January, 2016 – 2021
External Examiner	MS. Thesis: Concertina gait leavening for snake robots using Artificial Neural Networks (Ms. Mehreen Gul, BUITEMS).	7 th January, 2019
External Examiner	MS. Thesis: Prediction of students' performance in B.A/BSC using data mining techniques (Mr. Imam Dad, BUITEMS).	22 nd November, 2016
External Examiner	Presentation and Viva Voce Exams in IBA, Sukkur.	29 th February, 2016
Focal Person	Change Maker Institute Project.	15 th February, 2016
Member	Prospectus Committee for Master level admissions.	19 th January, 2017- 2018
Subject Expert	Fifth Selection Board of University of Turbat.	17 th January, 2017
Focal Person	Community College Administrator Program.	4 th December, 2017
Technical Expert	Stakeholder conference for launching BS Programs.	24 th August, 2017
Member	Scrutiny Committee, University of Balochistan.	March, 2017- 2018

Non-voting Member	Committee for streamlining the operations of Pure and Applied Biology Journal.	9 th February, 2017
Member	Grievance Redressal Committee.	October, 2016 – 2017
Program Coordinator (MCS)	Department of Computer Science and Information Technology, UoB.	25 th August, 2015

5. TEACHING/ COURSE FILES

A. Courses Developed for M.A/ M.Sc. / M.Phil. / Ph.D.

Course Code/Name	Catalog Description	Program and Year/Semester
CS605: Advanced Topics in Machine Learning 3(3-0)	Introduction, Probability Theory, Decision Theory, Model Selection, Probability distribution, linear models for regression and classification, deep neural networks, kernel methods, sparse Kernel machines, graphical models, mixture models and EM, combining models, deep learning architectures. transfer learning and generative models, compiling, configuring and installing CUCA and CUDIN for deep learning model training	PhD, Elective
CS513: Data Mining 3(3-0)	Introduction to Data Mining (DM), task identification, data processing steps, high-dimensional data classifiers, decision trees, neural networks, clustering algorithms, association rules mining and sequences, introduction to Weka, case studies.	MSCS Elective
CS324: Artificial Intelligence 3(3-0)	Introduction to Artificial Intelligence and sub areas, intelligent agents, problem solving through un-informed search, problem solving through informed search, heuristics, AI and playing games, introduction to knowledge representation, first order logic and prolog, planning, machine learning, Robotics, introduction to some advanced topics, AI programming, present in future of AI.	BS (CS&IT) 7 th & 8 th Semester

B. Courses Taught or Practical Conducted

Course Code/Name	Catalog Description	Program and Year/Semester
Machine Learning 3(3-0)	Introduction to ML (ML), Prospects of ML, Data Engineering for ML, Feature Selection and Engineering for ML, Learning & Its Type, Supervised ML, Un-Supervised ML, Design of Experiment and Model Validations, Building Mixture of	PhD (CS) 1 st Semester Session 2021-2022

	Models. Research Articles and Hands-on building models	
CS-814: Independent Studies	One-on-one mentorship on a research topic between the student and a faculty member. The course contents include: Proposal and Planning, Systematic Literature Review, Research and Analysis, Regular Meetings, Documentation and Reporting	PhD (CS) 2 nd Semester Session 2021-2024
Probability and Statistics 3(3-0) (Comp Supp)	Basic probability theory	BS(CS) 3 rd Semester 2018-2022 BS(CS) 3 rd Semester 2017-2021
CS414: Artificial Intelligence Principles 3(3-0)	Introduction to Artificial Intelligence and sub areas, intelligent agents, problem solving through un-informed search, problem solving through informed search, heuristics, AI and playing games, introduction to knowledge representation, first order logic and prolog, planning, machine learning, Robotics, introduction to some advanced topics, AI programming, present in future of AI.	MCS 4 th Semester (Morning & Evening) Session (2014-2016), MCS 4 th Semester (Morning & Evening) Session (2017-2019) MCS 4 th Semester (Morning) Session (2017-2019) BS (CS&IT) 7 th & 8 th Semester Session (2010-2014) BS (CS&IT) 7 th Semester Session (2012-2016) BS (CS&IT) 7 th & 8 th Semester Session (2013-2017) BS (CS&IT) 7 th Semester Session (2013-2017) BS (CS&IT) 7 th Semester Session (2016-2020)
CS805: Advanced Topics in Machine Learning 3(3-0)	Introduction, Probability Theory, Decision Theory, Model Selection, Probability distribution, linear models for regression and classification, neural networks, kernel methods, sparse Kernel machines, graphical models, mixture models and EM, combining models.	PhD 1 st and 2 nd Semester Session (2015-2018), (2014-2017), (2016-2019) (2021-2022)
CS713: Data Mining 3(3-0)	Introduction to Data Mining (DM), task identification, data processing steps, high-dimensional data classifiers, decision trees, neural networks, clustering algorithms, association rules mining and sequences, introduction to Weka, case studies.	MSCS 2 nd Semester Session (2014-2016), MSCS 2 nd Semester Session (2015-2017) MSCS 2 nd Semester Session (2016-2018) MSCS 2 nd Semester Session (2017-2019) MSCS 2 nd Semester Session (2018-2020)

		MSCS 2 nd Semester Session (2018-2020) MCS 4 th Semester Session (2018-2020) MCS 1 st Semester Session (2022-2024) BS(CS) Morning Session 2017-21 8 th Semester 2021 BS(CS) Evening Session 2017-21 8 th Semester 2021
CS504: Theory of Computation 3(3-0)	Structure of programming languages and their implementation, basic language design principles, abstract data types, functional languages, type systems, object-oriented languages, basics of lexing, parsing, syntax-directed translation, semantic analysis, and code generation, automata theory, formal languages, turing machines, computability theory and reducibility, computational complexity, determinism, non- determinism, time hierarchy, space hierarchy, NP completeness, selected advanced topic.	MSCS 1 st Semester Session (2015-2017)
CS322: Compiler Construction	Introduction to formal languages, basic compiler structure, one pass vs multi pass compiler, different phases of compiler, formal languages, automata.	BS (CS&IT) 7 th Semester Session (2011-2015)

6. SOCIAL MEDIA LINKS

- ➔ <https://www.youtube.com/channel/UCrTk-nG2U1hBin5Y3MwrsAw/videos>
- ➔ <http://gil.uob.edu.pk>,
- ➔ <https://www.facebook.com/govtinnovationlab>,
- ➔ <https://www.instagram.com/governmentinnovationlab>, @GILUoB (Twitter), Daily Jang Quetta 15th August 2021
- ➔ <https://www.pk.undp.org/content/pakistan/en/home/blog/2021/undp-and-university-of-balochistans-sdg-chaallenge-cup-2020-comes.html>
- ➔ https://pakistan.un.org/sites/default/files/2020-12/COVID-19brief_dec2020_v2.pdf
- ➔ <https://www.techjuice.pk/a-balochi-student-raises-rs-14-million-from-hec-for-his-eye-smart-helmet-to-minimize-risks-in-mining/>
- ➔ <https://www.arabnews.pk/node/1530301/pakistan>
- ➔ <https://ir.iba.edu.pk/faculty-research-books/14/>

- ➞ <https://gulfnews.com/amp/world/asia/pakistan/there-is-a-light-beyond-the-tunnel-for-coal-miners-1.65493004>
- ➞ <https://ieeexplore.ieee.org/document/9628259>
- ➞ <https://twitter.com/drwaheednoor?lang=en>
- ➞ <https://youtu.be/MEMOAyPHcL0>
- ➞ <http://gil.uob.edu.pk>
- ➞ <http://cerbm.com>
- ➞ <https://satha.org/Projects/Entrepreneurial-Scientists.aspx>