Dr.Shahnawaz Qureshi

Summary

- 8 years of successful professional teaching and research experience at International and National level.
- Worked in European Research Project as Master Thesis in Distributed and Intelligent Systems Lab at BTH Sweden, known as PsyIntEC-Psychophysiological interaction and empathetic cognition for human-robot cooperative work.
  http://www.echord.info/wikis/website/psyintec.html
- Work as Data Science, Machine and Deep learning Scientist since 2011 till present
- Funding Project Awardee as Principal Investigator, winner 1 Million Pakistan Rupees
- Work as peer reviewer in World Health Organization WHO's Global Dementia Observatory Knowledge Exchange (GDO KE) Platform
- Hand on experience using machine and deep learning on different problems such as (Human EEG emotional dataset, Brain MRI Images, Human EEG Sleep and Rat EEG Sleep dataset, Agricultural(Crops and Weed dataset), Genomic dataset with different Neural Network architecture like (Tensor flow etc.)
- Winner of Poster session at 24th European student Conference Berlin, Germany.

Academic Qualifications

2016–2019	**PhD in Computer Science:Evaluated by World Education Services(WES), as equivalent to a Canadian PhD Degree**, *Prince of Songkla University*, Thailand, *Specialized in Machine and Deep Learning*. **Thesis Title:** A Genetic Algorithm with Convolutional Neural Networks for Classification of Sleep Stages from Single-Channel EEG Signals without Hand-Engineering Feature Extraction
2010–2012	**Ms in Computer Science:Evaluated by World Education Services(WES), as equivalent to a two-year Canadian Master's Degree**, *Blekinge Institute of Technology*, Sweden, *Specialized in Machine Learning*. **Thesis Title:** An Empirical Study of Machine Learning Techniques for Classifying Emotional States from EEG Data
2004–2008	**BS (Hons) in Computer Science**, *Hazara University*, Pakistan, *CGPA –3.14/4.0*. **Final Year Project:** Virtual Doctor Clinic Expert System
May 2023-July 2023	**Oxford Machine Learning Summer School (OxML2023)**, *Oxford Mathematical Institute,Oxford,Organized by AI for Global Goals & in partnership with the University of Oxford's Deep Medicine & CIFAR*, United Kingdom, *CPD Certification*. **Track:** Attending MLx Health in Person

Professional Experiences

Sep 2020–Present	**Asst.Prof**, NATIONAL UNIVERSITY OF COMPUTING AND EMERGING SCIENCES (FAST UNIVERSITY), Pakistan. **Duties:**Teaching at undergraduate and postgraduate level **Courses:** Data Science, Statistical Modeling, Advanced Machine Learning, Artificial Intelligence, Statistical Modeling, Human Computer Interaction, Data Structure and Deep Learning for Perception
August 2019–July 2020	**Lecturer**, MAYNOOTH INTERNATIONAL ENGINEERING COLLEGE (NATIONAL UNIVERSITY OF IRELAND MAYNOOTH UNIVERSITY), China. **Duties:**Teaching at undergraduate level **Courses:**Embedded System and Intro to Computer Science II
Feb 2017–Aug 2017	**Teaching Assistant**, PRINCE OF SONGKLA UNIVERSITY INTERNATIONAL COLLEGE, Thailand. **Duties:**Teaching at undergraduate level **Courses:** Database Management System
Sep 2015–Aug 2016	**Research Associate**, ANKARA UNIVERSITY, ANKARA, Turkey. **Duties:**Teaching and Research Work
Feb 2013–Aug 2015	**Lecturer**, HAZARA UNIVERSITY, Pakistan. **Duties:**Teaching at undergraduate and graduate level **Courses:** Artificial Intelligence, Intro to Computing, Computer Architecture, Web Engineering, Computer Networks
May 2009–June 2010	**Lecturer**, GOVERNMENT POST GRADUATE COLLEGE NO 1, Pakistan. **Duties:**Teaching at undergraduate level **Courses:** Web Engineering, Data Structure
Feb 2008–Sep 2008	**Lecturer**, REGIONAL INSTITUTE FOR HUMAN DEVELOPMENT, Pakistan. **Duties:**Teaching at undergraduate level **Courses:** Into to Computing, Database
Feb 2008–Aug 2012	**Developer**, REAL SOFT, Pakistan. **Duties:** Web development in Word Press

Publications

ISI Index

1. Alsolai, H., **Qureshi, S**, Zeeshan Iqbal, Siriut Vanichayobon ,Craig A. Lindley , Henesey, L. E, & Seppo Karrila "A Systematic Review of Literature on Automated Sleep Scoring" in IEEE Access, 2022, doi: 10.1109/ACCESS.2022.3194145 I.F:3.367

2. **Shahnawaz Qureshi**, Seppo Karrila, Siriut Vanichayobon "Human Sleep Scoring Based on K-Nearest Neighbors" Turkish Journal of Electrical Engineering & Computer Sciences, Year:2018 Volume: 26 Number:6, IF: 0.697.

3. **Qureshi Shahnawaz**, Seppo Karrila, Siriut Vanichayobon "A Genetic Algorithm Designing the Convolutional Neural Network Architecture for Optimal Classification of Sleep Stages from a Single EEG Channel (CNN SleepTuneNet)" Turkish Journal of Electrical Engineering & Computer Sciences, Year:2019 Volume: 27 Number:6, IF: 0.697.

4. Alsolai, H., **Qureshi, S**, Zeeshan Iqbal, S. M, Ameer, A, Cheaha, D, Henesey, L. E, & Karrila, S

"Employing a Long-Short-Term Memory Neural Network in improving the Automatic Sleep Stage Classification of Pharmaco-EEG Profiles" Applied Sciences 12, no. 10 (2022): 5248, IF:2.679.

5. Mahmood ul Hassana, Ammara Ikramb, Amin A. Al-Awady, **Shahnawaz Qureshi**, Hani Al-shahranic, Adel Rajabc, Syed Muhammad Zeeshan Iqbald, Asadullah Shaikhe & Seppo Karrila, "Binclean: Sanitizing Disassemblies to Improve Malware Recognition", Journal of Information Security and Applications, IF:5.6, Status: Under Review.

6. **Shahnawaz Qureshi** , Syed Muhammad Zesshan Iqbal, Asif Ameer, Seppo Karrila, Yazeed Yasin Ghadi & Syed Aziz Shah, "Enhancing Drug-Target Interaction Predictions in Context of Neurodegenerative Diseases Using Bidirectional Long Short-Term Memory in Pharmaco-EEG Analysis", Computers in Biology and Medicine, IF: 7.7, Status: Under Review.

7. Zunaira Anwera, **Shahnawaz Qureshi**, Ali Zia, Syed Muhammad Zeeshan Iqbal, Sajid Anwer & Seppo Karril "Predicting User Behavior on Video Streaming by Using Watch-Time Duration Analysis", Computers in Human Behavior, IF: 9.9, Status: Under Review.

8. Mahmood ul Hassan1, Zunaira Anwar, Amin A. Al-Awady, **Shahnawaz Qureshi**,Mohammad Alsulami, Ali Zia, Sultan Alyami, Syed Muhammad Zeeshan Iqbal, Sajid Anwar, Asadullah Shaikh, "Genre-Aware User Profiling using Duration Count Matrices: A Novel Approach to Enhancing Content Recommendation Systems", PLOS ONE, Staus: Under Review.

Proceedings/Conferences

1. Asad Hussain,Hassan Ashas, Awais Shahid, **Shahnawaz Qureshi** & Seppo Karrila,"Hybrid Approach Involving Genetic Algorithm and Hill Climbing to Resolve the Timetable Scheduling for a University" Future of Information and Communications Conference (FICC Germany 2024), Status: Accepted

2. **Qureshi Shahnawaz**, Johan Hagelback, Syed Muhammad Zeeshan Iqbal, Hamad Javaid, & Craig A. Lindley. "Evaluation of Classifiers for Emotion Detection While Performing Physical and Visual Tasks: Tower of Hanoi and IAPS." In Proceedings of SAI Intelligent Systems Conference, London, UK, pp. 347-363. Springer, 2018.

3. **Qureshi Shahnawaz** and Sirirut Vanichayobon "Evaluate Different Machine Learning Techniques for Classifying Sleep Stages on Single-Channel EEG", 14th International Joint Conference on Computer Science and Software Engineering, 2017 IEEE Thailand.

4. Ahmad Tauseef Sohaib, **Qureshi Shahnawaz**, Johan Hagelback, Olle Hilborn, Petar Jercic, "Evaluating Classifiers for Emotion Recognition using EEG" 7th HCI International Conference, 21-26 July 2013, Las Vegas, Nevada, USA.

5. Muhammad Nadeem, **Qureshi Shahnawaz**, Syed Muhammad Zeeshan Iqbal, Naveeda Bibi and Lars Lundberg, "Analysis and Comparison of Web Development Platform based on Software Quality Attributes in Network Management System", Journal of Advances in Computer Networks, Vol. 5, No. 1, June 2017.

6. **Qureshi Shahnawaz**, Ahmad Tauseef Sohaib, Salman Chaudhry, "Classifying Emotional States from EEG Data using Machine Learning Techniques" 24th European Students Conference 4–7th Sep 2013, Berlin, Germany. [Poster published]

Book Chapter

1. **Shahnawaz Qureshi**, Muhammad Haseeb Arshad, Md Nurul Islam, M Shamim Kaiser, Mufti Mahmud, & Marzia Hoque Tania, "Navigating the Neuroethical Frontier:Brain-Computer Interface Dilemmas", Springer, Status: Under Review

Funding Project Awardee as Principal Investigator

Project Title: Low Altitude based Early Site-specific Precision Farming and Recommendation
Funding Agency Name: Faculty Research Support Grant
Total Amount: 1000,000 (1 Million) PKR
Start Date: Jan 2022– Dec 2022

Funding Project Submitted as Co-Principal Investigator

Project Title: AI Application for Addressing Aging and Mental Disorder Conditions Using Deep Learning Technique
Funding Agency Name: Saudi Basic Science Initiative Grant 2024
Total Amount: 1600,000 Saudi Rayal

Online Courses and Hands-on Projects

○ Metaverse Fundamentals:Blockchain,Cryptocurrency and NTFs Earned Course Certificate from Udemy
○ Google Cloud Big Data and Machine Learning Fundamentals Earned Course Certificate from Coursera
○ Classify Images of Clouds in the Cloud with AutoML Vision Earned Project Certificate from Coursera
○ Data Science on Google Cloud: Machine Learning hands on Google Cloud Self-Paced Labs conducted by Google Cloud Partner
○ BigQuery for Machine Learning hands on Google Cloud Self-Paced Labs conducted by Google Cloud Partner
○ Data Science (Certificate Earned from DataCamp 365)
○ Applied Machine Learning For Healthcare (Certificate Earned from Udemy)
○ CS231: Convolutional Neural Networks for Visual Recognition, Stanford University, USA.
○ Deep Learning, Stanford University, USA.
○ Deep Learning for Business, Yonsei University, Japan.
○ WEKA Machine Learning advance course, Waikato University, New Zealand.

Experience with different Dataset using Deep learning Zoo Model

○ EEG,ECG,EMG human behavior emotional Dataset
○ Sleep EEG Dataset
○ Cat and Dogs Datasets
○ Minist Dataset
○ Car damage
○ Brain MRI image
○ Agriculture Dataset (Crops and Weeds)
○ Hand on experience with different libraries such as Google Tensor flow, Keras etc. .

Hand on Experience Brain Computer Interface Devices

○ Emotive Epoch+ EEG headset: A high-resolution 14 channel mobile EEG used for contextualized scientific research. `https://www.youtube.com/watch?v=lcWt1zi3Qjgt=60s`
○ EEG Electro Cap

- Biosemi Active Two System
- Ant Neuro eego mylab
- Emotive Insight headset 5 channel

Software Hand on Experience

- WEKA 3.8.0 (Machine Learning Tool)
- Computer Vision Annotation Tool (CVAT)
- Spark Unified Engine for large-scale data analytics
- Tensor Flow and Google Colab
- Matlab 2015a
- Python 3.8
- Matlab EEG Lab Toolbox
- MNElab Python EEG,EMG,MRI and more Analysis and Visualization
- LabView
- Lab chart 8
- EDF and EDF+ Browser
- Emotive Control panel
- Emotive EmoBot
- Ant Neuro eego mylab software
- Moodle Plateform and Virtual Programming Lab

Projects supervision undergraduate and graduate Students

National Students

1. Chatbot (Fast University Pakistan)
2. Eye disease detection by deep learning (Fast University Pakistan)
3. Emotion detection by deep learning (Fast University Pakistan)
4. 3-D Virtual Tour for Hazara University Pakistan
5. Mind Maze Game Hazara University Pakistan

Supervision for Graduate Students Thesis

1. Optimization Oblivious Binary Diffing using Machine Learning
2. A tool to Sanitize Malware Disassembly
3. Foreign Exchange Market Prediction by Deep Learning

Conferences Attended

1. Accelerating Climate Science with Artificial Intelligence, Webnair Event, July 7 2021
2. MLOps:From Model-centric to Data-centric Artificial Intelligence, Online Event, March 24 2021
3. AI Finland & AI Day 2021:Reboot with Artificial Intelligence, Virtual Event, Nov 5 2021
4. Data Science Conference Europe 2020, Online 15-19 November 2020
5. Intelligent Systems Conference, America Square Conference Center, London, United Kingdom, IEEE 6–8 Sep 2018
6. 5th International Conference on Information and Computer Networks, Bangkok, Thailand 26–28 Feb 2017
7. 14th International Joint Conference on Computer Science and Software Engineering, Thailand, IEEE 12–14 July 2017
8. 24th European Students' Conference, Berlin, Germany 4–7 Sep 2013

9. Poster Competition, Blekinge Institute of technology, Sweden, IEEE 15 June 2012

Workshop Attended

1. One week workshop for Southeast Asia Machine Learning School Conducted by Google, Facebook and Deep Mind
2. Academic Writing and Presentation, Prince of Songkla University, Prof. Dr. Martin Walton from Universite de Pau et des Pays de I'Adour France
3. International Workshop on Machine Learning for Understanding the Brain, Middle East Technical University, Ankara, Turkey

Scholarship Award

2019   Southeast Asia Machine Learning School Conducted by Google, Facebook and Deep Mind

2016   Thailand's Education Hub of ASEAN Countries Project (THE-AC) scholarship for PhD position, Thailand

2010   Swedish Government Scholarship for Master Program, Sweden

2013   Winner of the Poster Contest Session in 24th European Students Conference, Berlin, Germany

Professional Membership

○ 2020 Member of the International Scientific Program Committee:INTELLI Series 2020
○ Jan 2012– Dec 2012 Computer Society, IEEE
○ 2015–Present Society of Artificial Intelligence, International Association of Engineers
○ 2015–Present Society of Data Mining, International Association of Engineers
○ 2015–Present Society of Bioinformatics, International Association of Engineers
○ 2015–Present Society of Scientific Computing, International Association of Engineers

Country Visited

○ 2023 University of Oxford United Kingdom
○ 2010 2012 Master Studies, Sweden
○ 2011 Visitor, Barcelona, Spain
○ 2011-2012 Study Tour(Oxford University, Cambridge university, Newcastle University and Conference attended,UK
○ 2015-2016, Research Assistant, Turkey
○ 2016-2019, PhD Studies, Thailand
○ 2019, Workshop Attended, Indonesia

Communication Skills

2018   Oral Presentation at Intelligent Systems Conference, America Square Conference Center, London, United Kingdom

2017   Oral Presentation at 14th International Joint Conference on Computer Science and Software Engineering, Thailand

2013   Poster at 24th European Students' Conference, Berlin, Germany

Languages

English	**Fluent**	*Speaking, Reading,Writing and Listening*
Turkish	**Intermediate**	*C1 Certificate*
Swedish	**Basic**	*A1 Level*
Danish	**Basic**	*Basic words and phrases only*
Urdu	**Fluent**	*Mothertongue*

Reference

University Advisors

1. Asst.Prof.Dr.Sirirut Vanichayobon
   Email: sirirut.v@gmail.com
   Department of computer science, Prince of Songkla University, Thailand

2. Prof. Dr. Craig Lindley
   Email:craig.lindley@data61.csiro.au
   Senior Principal Research Scientist CSIRO Data 61 Pullenvale, Australia.