

## Dr. Waseemullah

(HEC Approved PhD Supervisor)

Department of Computer Science & Information Technology,  
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## Objective

To research in the area of Artificial Intelligence with special Computer Vision and to explore and teach cutting-edge technologies in Computer Science and Information Technology.

## Professional Experience

### Assistant Professor      December 2019 to date

Department of Computer Science & Information Technology, NED University of Engineering & Technology.

### Lecturer                      June 2010 to December 2019

Department of Computer Science & Information Technology, NED University of Engineering & Technology.

### IT Manager                      March 2005 to June 2010

Department of Computer Science & Information Technology, NED University of Engineering & Technology.

### Courses Taught:

- Artificial Intelligence and Expert Systems      (Undergrad level course)
- Deep Learning      (Postgraduate level course)
- Image Processing and Computer Vision      (Postgraduate level course)
- Data Structure Algorithms and Applications (Undergrad level course)
- Programming Languages/Fundamentals (C, PYTHON)      (Undergrad level course)
- Object Oriented Programming (C++, PYTHON) (Undergrad and Postgraduate level course)
- Visual Programming (C#)      (Undergrad level course)
- Fundamentals of Information Technology      (Undergrad level course)

## Education

### Ph.D. in Computer Science                      December 2019

From CSIT Department, NED University of Engineering & Technology.  
Thesis title: Unsupervised Classification of Videos using Sematic Analysis

### Master of Computer Science and Information Technology 2008

NED University of Engineering & Technology.

### Bachelor of Computer Science & Information Technology 2005

NED University of Engineering & Technology.

## Publications

### Journal Papers

1. Siddiqui, M.A., Haider, N.G. , **Waseemullah** and Mustafa, S.M.N., 2024. Hybrid model for speech emotion recognition of normal and autistic children (SERNAC). *Mehran University Research Journal of Engineering & Technology*, 43(2), pp.20-33.
2. Raza, A., Latif, M., Farooq, M.U., Baig, M.A. and Akhtar, M.A., **Waseemullah**, 2023. Enabling Context-based AI in Chatbots for conveying Personalized Interdisciplinary Knowledge to Users. *Engineering, Technology & Applied Science Research*, 13(6), pp.12231-12236.
3. Kazi, A.K.; Khan, S.M.; **Waseemullah**; Farooq, U.; Hina, S. Compacted Area with Effective Links (CAEL) for Data Dissemination in VANETs. *Sensors* 2022, 22, 3448. [Impact Factor: 3.576]

4. **Waseemullah**; Fatima, Z.; Zardari, S.; Fahim, M.; Andleeb Siddiqui, M.; Ibrahim, A.A.A.; Nisar, K.; Naz, L.F. A Novel Approach for Semantic Extractive Text Summarization. *Appl. Sci.* 2022, 12, 4479. [Impact Factor: 2.697]
5. Fatima Z, Tanveer MH, **Waseemullah**, Zardari S, Naz LF, Khadim H, Ahmed N, Tahir M. Production Plant and Warehouse Automation with IoT and Industry 5.0. *Applied Sciences.* 2022 Feb 16;12(4):2053.[Impact Factor: 2.697]
6. Khan, H.M., **Waseemullah**, M.A.B., Mahmood, S. and Khan, M.A.B., 2022. Analysis of 3D Building Construction Applications in Augmented Reality. *International journal of computer science and network security: IJCSNS*, 22(10), pp.340-346.
7. **Waseemullah**, W., Kazi, A.K., Hyder, M.F. and Basit, F.A., 2022. Animated Game-Based Learning of Data Structures In Professional Education. *International Journal of Computer Science & Network Security*, 22(9), pp.1-6.
8. Abdul Karim Kazi, **Waseemullah**, Mirza Adnan Baig and Shahzaib Khan, 2022. Breast Cancer Prediction Using Data Mining Classification Techniques. *International Journal of Computer Science & Network Security*, Vol. 22 No. 9 pp. 696-704.
9. M. F. Hyder, . **Waseemullah**, and M. U. Farooq, "Towards Countering the Insider Reconnaissance Using a Combination of Shuffling and Diversity Moving Target Defense Techniques", *Eng. Technol. Appl. Sci. Res.*, vol. 11, no. 6, pp. 7745–7749, Dec. 2021.
10. **Waseemullah** ,Hyder, Muhammad Faraz, Maria Andleeb Siddiqui, and Muhammad Mukarram. "TV Ad Detection Using the Base64 Encoding Technique." *Engineering, Technology & Applied Science Research* 11, no. 5 (2021): 7605-7609.
11. Anwer, M., Khan, S.M. and Farooq, M.U., **Waseemullah**, 2021. Attack detection in IoT using machine learning. *Engineering, Technology & Applied Science Research*, 11(3), pp.7273-7278.
12. Hyder, Muhammad Faraz, **Waseemullah**, Muhammad Umer Farooq, Usama Ahmed, and Wajahat Raza. "Towards Enhancing the Endpoint Security using Moving Target Defense (Shuffle-based Approach) in Software Defined Networking." *Engineering, Technology & Applied Science Research* 11, no. 4 (2021): 7483-7488.
13. Hyder, Muhammad Faraz, Syeda Tooba, **Waseemullah**. "Performance Evaluation of RSA-based Secure Cloud Storage Protocol using OpenStack." *Engineering, Technology & Applied Science Research* 11, no. 4 (2021): 7321-7325.
14. Hamid, M. A., Alhaidari, **Waseemullah**, Khan, N. A., Usmani, B. A., & Raza, S. M. W. (2020). Dynamic changes of multiple sclerosis lesions on T2-FLAIR MRI using digital image processing. *International Journal of Advanced Computer Science and Applications*, 11(2), 200-209.
15. **Waseemullah**, Najeed Ahmed Khan, and Umair Amin. "Unsupervised Ads Detection in TV Transmissions." *International Journal of Advanced Computer Science and Applications* 9.4 (2018): 380-386.
16. Khan, Najeed Ahmed, Umair Amin, **Waseemullah** and Muhammad Umer. "Unsupervised Commercials Identification in Videos." *International Journal of Advanced Computer Science and Applications* 8.2 (2017): 127-133.

### **Conference Papers**

1. Tahir Hassan, Khalid Mansour, **Waseemullah** Nazir, Muhammad Qasim Memon, 2024, December, Carbon Dioxide Emission Forecasting using Machine Learning and Time Series Statistical Models, In 2024 25th International Arab Conference on Information Technology (ACIT) [Accepted].
2. **Waseemullah**, T. Hassan, S. Majeed and M. Q. Memon, "Urban Pluvial Flood Prediction Using Machine Learning Models," 2024 4th International Conference on Innovations in Computer Science (ICONICS), Karachi, Pakistan, 2024, pp. 1-6, doi: 10.1109/ICONICS64289.2024.10824627.
3. **Waseemullah**, Manzoor, S. and Baig, M.A., 2024, August. Prediction of Heart Disease using Data Mining and Machine Learning. In 2024 International Visualization, Informatics and Technology Conference (IVIT) (pp. 115-121). IEEE.
4. Hussain, S.A. **Waseemullah** and Khan, N.A., 2022, December. Face-to-camera distance estimation using machine learning. In 2022 3rd International Conference on Innovations in Computer Science & Software Engineering (ICONICS) (pp. 1-8). IEEE.
5. Ali, J., **Waseemullah**, Khan, M.A. and Khan, N.A., 2022, December. Machine Learning Approaches for Prediction of Nutrition Deficiency among Women of Different Age Groups. In 2022 3rd International Conference on Innovations in Computer Science & Software Engineering (ICONICS) (pp. 1-7). IEEE.

## PhD Scholars under my supervision (04)

| Sr. No                       | Name                    | Research Title  | Status                     |
|------------------------------|-------------------------|---|----------------------------|
| 1.                           | Adnan Ahmed             | Investigating The Efficient Electroencephalogram Signals Interpretation Into Text Using Machine Learning                      | Research Phase             |
| 2.                           | Syed Faisal Kazmi       | Investigating Machine Learning-based Prediction Modeling Techniques for Large-Scale Flood                                     | Research Phase             |
| 3.                           | Rohail Qamar            | Framework for Designing Computationally-Efficient Deep Neural Networks on Edge Computing using Adaptive Compression Technique | Research Phase             |
| 4.                           | Farjila                 | A Novel Approach For Subject-Independent Motor Imagery Classification Of EEG Signals Using Deep Neural Network                | Research Seminar Delivered |
| <b>Consultant Specialist</b> |                         |   |                            |
| 1.                           | Ammara Ashraf, Choudary | Automatic detection and elimination of numerous artifacts from EEG data using hybrid machine learning techniques              | Research Phase             |

## MS Thesis Supervisor

Supervised (19 Research Project) MS Thesis in Department of Computer Science & Information Technology, NED University.

| Sr. No | Name                      | Research Title   | Completed in Year |
|--------|---------------------------|--|-------------------|
| 1.     | Muhammad Wajahat Ali      | Optimizing Fraud Detection Models: Unravelling the Potential of Machine Learning and Deep Learning in Safeguarding Customer Transactions | 2024              |
| 2.     | Muhammad Abubakar Saleem  | Super-resolution assisted Ship Detection in Optical Remote Sensing Images  |                   |
| 3.     | Muhammad Rameez Qureshi   | Electroencephalography (EEG) Signals Eye State Classification Using Novel Machine Learning Technique                                     |                   |
| 4.     | Adnan Haider              | Automated Text Summarization using Deep Learning Algorithms  |                   |
| 5.     | Muhammad Umair Baig       | An Investigation towards Applications of Machine Learning and AI Algorithms on Financial Portfolio Management and Optimization           | 2023              |
| 6.     | Noor Afshan               | Research Analysis of ANN model in combination with data mining techniques for the prediction of Stock market trends                      |                   |
| 7.     | Rameez Ur Rehman Siddiqui | A ConvNet-based Object Detection for Unmanned Aerial Vehicles  |                   |
| 8.     | Mohsin Khan               | Obstacle detection for Intelligent cars using deep learning  | 2022              |
| 9.     | Syed Ausaf Hussain        | Distance Estimation Using Machine Learning Techniques  |                   |
| 10.    | Saba Manzoor              | Prediction of Heart Disease using Data Mining and Machine Learning   |                   |
| 11.    | Mehwish Shafiq Patel      | Exploring Machine Learning Approaches To Identify Students Attentiveness In Classrooms   |                   |
| 12.    | Javeria Ali               | Machine Learning Approaches for prediction of nutritional deficiency among women of different age groups                                 |                   |
| 13.    | Faraz Abdul Basir         | Animated Game-based Learning of Data Structures in Professional Education  | 2021              |
| 14.    | Nazish Ali                | Early Flagging of Acute Leukemias the Convergence of Cell Population Data Using Machine Learning approaches                              |                   |
| 15.    | Shahzad Rasool            | Sindhi Parts of Speech Tagging Using Deep Learning   | 2020              |
| 16.    | Humera Mehfooz Khan       | Analysis of 3D Building Construction applications in Augmented Reality   |                   |
| 17.    | Muhammad Faheem           | Extractive Text Summarization  |                   |
| 18.    | Muhammad Bilal            | Analysis, Comparison and Prediction of Health Diseases using Data Mining   | 2018              |
| 19.    | Mr. Shahzaib Khan         | Comparative study of Data Mining Classification Techniques Applied to Breast Cancer Data   |                   |

## Other Responsibilities

- Area Coordinator (Since 2017 till to date), Department of Computer Science & IT, NEDUET.
- Member of NCEAC departmental Committee.
- Taught Artificial Intelligence & Expert System at Department of Computer Science & IT, TUEST campus, NED UET in 2022.
- Member of departmental organizing Committee ICONICS'16.
- Member of departmental organizing Committee ICONICS'18.
- Member of departmental organizing Committee ICONICS'22.
- Member of departmental organizing Committee ICONICS'24.
- Member of NCEAC departmental Committee.
- Member of departmental Committee for preparing Undergraduate Level SAR Computer Science Programme (Department of Computer Science & IT, NEDUET).
- Member of departmental Committee for preparing Undergraduate Level SAR Computer Science Programme (TUEST, Department of Computer Science & IT, NEDUET).

## Grants received/ Funded Projects:

| Project Title  | Donor  | Amount PKR (M) | Team Members                 |
|--|--|----------------|------------------------------|
| <b>PhD Thesis</b><br>Framework for Designing Computationally-Efficient Deep Neural Networks on Edge Computing using Adaptive Compression Technique | NED Research fund- 2025                                    | 0.5 Million    | Dr.Waseemullah (In-Progress) |
| <b>FYDP</b> -A biometric system for elderly people using eye detection   | National Grassroot ICT Research Initiative (NGIRI) 2023-24 | 0.08 Million   | Dr.Waseemullah (Completed)   |
| <b>PhD Thesis</b><br>Investigating the Efficient Electroencephalogram Signals Interpretation into Text using Machine Learning.                     | MoST Endowment Fund - 2023 /NED Research fund- 2022        | 4.0 Million    | Dr.Waseemullah (In-Progress) |
| <b>PhD Thesis</b> Unsupervised Semantic Analysis of TV Commercial Videos.  | MoST Endowment Fund /NED Research fund- 2017               | 4.0 Million    | Dr.Waseemullah (Completed)   |

## Awards

1. Financial reward from NED University for publishing paper "A Novel Approach for Semantic Extractive Text Summarization", Rs. 100,000, published in 2022.
2. Financial reward from NED University for publishing paper "Production Plant and Warehouse Automation with IoT and Industry 5.0", Rs. 100,000, published in 2022.
3. Financial reward from NED University for publishing paper "Compacted Area with Effective Links (CAEL) for Data Dissemination in VANETs. ", Rs. 100,000, published in 2022
4. Financial reward from NED University for publishing paper "Breast Cancer Prediction Using Data Mining Classification Technique", Rs. 30,000, published in 2022.
5. Financial reward from NED University for publishing paper "Animated Game-Based Learning of Data Structures In Professional Education", Rs. 30,000, published in 2022
6. Financial reward from NED University for publishing paper "TV Ad Detection Using the Base64 Encoding Technique", Rs. 30,000, published in 2021.
7. Financial reward from NED University for publishing paper "Dynamic changes of multiple sclerosis lesions on T2-FLAIR MRI using digital image processing", Rs. 30,000, published in 2020.
8. Financial reward from NED University for publishing paper "Unsupervised Ads Detection in TV Transmissions", Rs. 30,000, published in 2018.

## Reviewer

1. IEEE Journal of Biomedical and Health Informatics, January 2025 [Q1 category]
2. International Visualization, Informatics and Technology Conference (IVIT2024) will be held through HYBRID CONFERENCE on 7th-8th August 2024
3. In 2024 4th International Conference on Innovations in Computer Science & Software Engineering (ICONICS)
4. In 2022 3rd International Conference on Innovations in Computer Science & Software Engineering (ICONICS)
5. ACM Transactions on Asian and Low-Resource Language Information Processing, Impact Factor and Ranking; 2022, 2.0, 113/145 (Q4).
6. Intelligent Automation & Soft Computing, 871 Coronado Center Drive, Suite 200, Henderson, Nevada, 89052, USA. [ Impact Factor 1.647] [ Jan 17, 2022]
7. University of Sindh Journal of Information and Communication Technology (USJICT)
8. HEC CPEC- Collaborative Research Grant, Batch "RGMS 2019-2020", May 2021.
9. NCETIET-2020: National Conference on Emerging Trends in Information and Engineering Technologies.  
Institute of Information and Communication Technology, Jamshoro, Pakistan, March 4-5, 2020

## Honours, Activities and Trainings

1. Completed 06 weeks Unity Certified Associate Game Developer and Unity Certified Associate Programmer Exam training from Unity Apr-Jul 2024
2. Completed 04 Months Bootcamp on Data Science (AI, ML) Jul-Dec. 2023
3. Completed 02 Months Deep Learning course from Dice Analytics Nov-Dec. 2022
4. Participated in Sindh HEC Research & Technology Showcase 2022
5. Participated Salesforce Hathacon held at FAST NUCES Karachi Dec. 2022
6. FYP evaluator in ZEB E-FEST'19 held at SZABIST Karachi Apr. 2019
7. Supervised Group of students from different universities of Pakistan in JENESYS. (JAPAN EAST-ASIA NETWORK OF EXCHANGE FOR STUDENTS AND YOUTHS) 2017
8. Attended 5 days training Microsoft Office Specialist on MS Office 2013 May 2016
9. Attended 2 days Workshop on Microsoft Exchange Server 2016 2016
10. Completed HEC Indigenous On Campus Training on "Financial Management" Oct. 2015
11. Completed 3 days QEC workshop on "Technical Computing with Matlab" Apr. 2015
12. Participated in the 5th Workshop on "Developing Industry Driven Technologies" Jan 2015
13. Attended 2 days international workshop "Literature Review Made Easy for Researcher" 2014
14. Completed course on PGC in Oracle 9i 2006
15. Completed training on LINUX by PSEB May 2005
16. Presented paper at e-indus 2004 IIEE Student Branch at PCSIR-IIEE Karachi 2004
17. Participated ITCN-Asia 2003 Sept. 2003
18. Participated in 14th All Pakistan Software Competition & Exhibition Islamabad Jul 2003
19. Winner in ProQuest 2003 Software Competition, Karachi University Sept. 2003
20. Cash Award NED University of Engineering & Technology Oct. 2003  
Engr. Abul Kalam sanction cash award for Winning "All Pakistan Software Competition. (ProQuest)" held at Karachi University.

## Personal Details

- . Marital Status: Married
- . Languages: English, Urdu & Sindhi
- . Hobbies: Swimming & learning new languages.