

ENGR. SHARJEEL ABID BUTT

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LinkedIn: <https://www.linkedin.com/in/neoboy>

GitHub: <https://github.com/neoboy>

Google Scholar: https://scholar.google.com.pk/citations?user=NI_EpcYAAAAAJ&hl=en&oi=ao

ORCID ID: <https://orcid.org/0000-0002-3396-8224>

ResearchGate: https://www.researchgate.net/profile/Engr_Sharjeel_Abid_Butt

Comprehensive understanding and knowledge in Machine Learning algorithms & Heuristic Computation Techniques. Worked on regression, classification & feature selection problems. Experienced with Image processing and Segmentation, Image Classification, Sparse representations & Image de-noising, Speech recognition, Speech Activity Detection, Acoustic classification, Speech source separation. Specialized in numerical computations, optimization, handling data sets, normalization, standardization & visualization using python programming language.

Hands-on experience using Python; Numpy, Scipy, scikit-learn, pandas, pyTorch, Keras and Tensorflow. Previous experience in System modeling and Identification using MATLAB and Simulink.

EDUCATION

Udacity Intel Edge IoT NanoDegree ([Syllabus](#))

April 2020 – July 2020

Won the \$1200 Nanodegree program after being in the Top 750 out of 16000 participants of Phase 1 Challenge program. [<https://www.udacity.com/scholarships/intel-edge-ai-scholarship>]

Udacity Deep Learning NanoDegree ([Syllabus](#))

September 2019 – December 2019

Won the \$1600 Nanodegree program after being in the Top 300 out of 6000 participants of Phase 1 Secure and Private AI Challenge program. [<https://www.udacity.com/facebook-AI-scholarship>]

MS Electronic Engineering (CGPA 3.55/4.00), 2010-2014

International Islamic University, Islamabad (Pakistan)

Thesis: Lyapunov stable adaptive dynamic RBF and tangent hyperbolic control methods for a class of nonlinear system.

Cisco Certified Network Associate (Academic Certificate), 2012-2013

Cisco Networking Academy, FBAS, International Islamic University, Islamabad (Pakistan)

Bachelors in Electrical Engineering (CGPA 3.08/4.00), 2005-2009

Air University, Islamabad (Pakistan).

Final Year Project: Wireless Energy metering using ZigBee and GSM.

EXPERIENCE

Researcher (Signal & Speech Processing Group - SSPG)

September 2015-Present

International Islamic University, Islamabad (Pakistan)

Studied problems related to Pattern Recognition, Advance Digital Image Processing, Speech Processing, Adaptive Signal Processing, Heuristic Computation Techniques & Deep Learning.

Worked on following problems (GitHub links provided):

- Implementing a Binary Logistic Classifier for MNIST dataset (<https://git.io/vFjA8>)
- Implementing SoftMax Regression for MNIST dataset
- Implementing a Binary Classifier for MNIST Dataset using Neural Networks (<https://git.io/vbe0V>)
- Speech source separation using Deep Learning (<https://git.io/vbe0M>)
- Comparison of Fractional & Standard Neural Networks (<https://git.io/vbe0Q>)

Lab Engineer

January 2010-Present

International Islamic University Islamabad.

Teaching experience: Computer Networks, Instrumentation & Measurement, ECD I & II, Circuit Analysis I & II, Signals and Systems, Wireless Communication, ASIC Design, Communication Systems, Digital Logic Design, AVR Microcontroller, Digital Signal Processing & FPGA based System Design.

PUBLICATIONS

- [1] B. Shoaib, I. M. Qureshi, S. A. Butt, S. U. Khan, and W. Khan, "Adaptive step size kernel least mean square algorithm for Lorenz time series prediction," in *2015 12th International Bhurban Conference on Applied Sciences and Technology (IBCAST)*, 2015, pp. 218–221.
- [2] B. Shoaib, I. M. Qureshi, S. Ullah Khan, S. A. Butt, and I. ul haq, "Kernel fractional affine projection algorithm," *Appl. Informatics*, vol. 2, no. 1, p. 12, Dec. 2015.
- [3] M. M. Jadoon, Q. Zhang, I. U. Haq, S. Butt, and A. Jadoon, "Three-Class Mammogram Classification Based on Descriptive CNN Features," *Biomed Res. Int.*, vol. 2017, pp. 1–11, 2017.
- [4] M. J. M, Q. Zhang, I. U. Haq, A. Jadoon, A. Basit, and S. Butt, "Classification of mammograms for breast cancer detection based on curvelet transform and multi-layer perceptron," *Biomed. Res.*, vol. 28, no. 10, 2017.
- [5] Z. A. Khan, S. Zubair, K. Imran, R. Ahmad, S. A. Butt, and N. I. Chaudhary, "A New Users Rating-Trend Based Collaborative Denoising Auto-Encoder for Top-N Recommender Systems," *IEEE Access*, vol. 7, pp. 141287–141310, 2019.

REFERENCES

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