Irfan Tariq, Ph.D.

mr.irfantariq@hotmail.com 15050563074
https://scholar.google.com/citations?user=QCzXbwcAAAAJ&hl=en
https://www.linkedin.com/in/irfan-t-219b6266/

Employment History

Feb 2018 - Sep 2018

Algorithm Engineer, (HUBEI QICHANG OPTOELECTRONICS CO., LTD, Nanjing, China)
The main contribution of this work is as follows:
An algorithm based on the fusion of Gabor features and texture orientation fields in the framework of Markov field modeling (MRF) was used to detect the wrinkles and other imperfections in the surrounding skin.

Sep 2018 - In present

Research Scholar, (Southeast University, Nanjing, China)
Pulsar signal period detection and Classification:
In this work, we proposed algorithms to detect the periodicity of pulsar signals. After the detection of pulsar signals, we designed a new deep learning and machine learning architecture to classify them.

Education

Sep 2018 – Ongoing

Ph.D., Southeast University, Nanjing, China.
Major: *Information and Communication Engineering.*
Thesis title: *Recent development in the detection and classification of Pulsar signals*
Courses study: *Advance digital signal processing , Introduction to wireless communication system, Deep Learning , Radio astronomy , Digital image processing, Wireless Sensor Network,*

Sep 2014 – July 2017

Ms, Nanjing University of Science and Technology, Nanjing, China.
Major: *Signal and Information processing.*
Thesis title: *Wideband Sensing for Sparse Spectrum.*

Research Publications

Journal Articles

1. Khan, A., Tariq, I., Khan, H., Khan, S. U., He, N., Zhiyang, L., Raza, F. et al. (2022). Lung cancer nodules detection via an adaptive boosting algorithm based on self-normalized multiview convolutional neural network. *Journal of Oncology, 2022.*
2. Liu, W., Meng, Q., Wang, C., Zhou, C., Yao, S., & Tariq, I. (2022). A real-time, pipelined incoherent dedispersion method and implementation in fpga. *Publications of the Astronomical Society of the Pacific, 134*(1031), 015008.
3. Tariq, I., Qiao, M., Wei, L., Yao, S., Zhou, C., Ali, Z., … Spanakis-Misirlis, A. (2022). Classification of pulsar signals using ensemble gradient boosting algorithms based on asymmetric under-sampling method. *Journal of Instrumentation, 17*(03), P03020.
4. Tariq, I., Meng, Q., Yao, S., Liu, W., Zhou, C., Ahmed, A., & Spanakis-Misirlis, A. (2022). Adaboost-dsnn: An adaptive boosting algorithm based on deep self normalized neural network for pulsar identification. *Monthly Notices of the Royal Astronomical Society, 511*(1), 683–690.

5. Yao, S., Meng, Q., Chen, C., & Tariq, I. (2022). A dptf algorithm for the time-delay estimation in the reflected environment. *Digital Signal Processing*, 103534.
6. Liu, W., Meng, Q., Wang, C., Zhou, C., Yao, S., & Tariq, I. (2021). An efficient channelization architecture and its implementation for radio astronomy. *Journal of Instrumentation*, *16*(08), P08047.
7. Yao, S., Meng, Q., Chen, C., Tariq, I., Zhou, C., & Liu, W. (2021). High-precision time delay estimation of narrowband radio signal by phat-lstm. *Measurement Science and Technology*, *32*(7), 075001.
8. Azeem, S. W., Tariq, I., Mehmood, K., Ehab, M., Rizwan, M., & Mond, M. A. (2020). Hybrid resonant three-level zcs converter suitable for photovoltaic power mvdc distribution network. *IET Renewable Power Generation*, *14*(11), 1956–1963.
9. Tariq, I., & Qiao, M. (2019). A fast dft method for generally k sparse signals recovery. *SN Applied Sciences*, *1*(11), 1–6.
10. Iqbal, M., Zhang, K., Iqbal, S., & Tariq, I. (2018). A fast and reliable dijkstra algorithm for online shortest path. *Int. J. Comput. Sci. Eng*, *5*(12), 24–27.
11. TARIQ, I., DONG, N.-f., WANG, J.-x., & ABBAS, S. R. (2016). Fast computing dft method for sparse signals based on downsampling. *DEStech Transactions on Engineering and Technology Research*, (iceea).

Conference Proceedings

1. Tariq, I., Qiao, M., Yao, S., Ullah, K., Khan, S. U., & Wei, L. (2022). Cost sensitive self-normalized deep convolutional neural network for pulsars selection. In *2022 4th international conference on computer communication and the internet (iccci)* (pp. 116–121). doi:10.1109/ICCCI55554.2022.9850263
2. Khan, A., He, N., Tariq, I., & Li, Z. (2021). Stacking ensemble method for early and advanced stage lung adenocarcinoma classification based on mirna expression. In *2021 10th international conference on bioinformatics and biomedical science* (pp. 76–81).
3. Abbas, Z., Li, J., Yadav, N., & Tariq, I. (2018). Computational task offloading in mobile edge computing using learning automata. In *2018 ieee/cic international conference on communications in china (iccc)* (pp. 57–61). IEEE.

Skills

Languages
- Strong reading, writing and speaking competencies for English.
- Basic Chinese
- Mother tongue: Pashto and Urdu.

Coding
- Matlab, Python, TensorFlow, Scikit-learn, PyTorch, Linux.
- Microsoft Office, PowerPoint.

Misc.
- Academic research, LaTeX typesetting and publishing.

Certification

April 2022
- **5G for everyone**
  Awarded by Qualcomm Wireless Academy

June-2022
- **Convolutional Neural Network**
  Awarded by deeplearning.ai

References

Available on Request