Abdul Basit, M.Sc.

CONTACT INFORMATION

Email:
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RESEARCH INTERESTS

Machine Learning, Remote Sensing, Convex Optimization, Sea Parameters Estimation, Semantic Image Segmentation

CURRENT POSITION

PhD Student, University of Genoa, Genoa, Italy 01 Nov 2023 – presen

EXPERIENCE

1. Research Assistant, Remote Sensing and Spatial Analytics Lab, Faculty c Engineering, Information Technology University of the Punjab, Lahore, Pakistar (01 June 2020 – 02 June 2022)
2. Research Associate, Remote Sensing and Spatial Analytics Lab, Faculty c Engineering, Information Technology University of the Punjab, Lahore, Pakistar (03 June 2022 – 30 November 2022)
3. Research Associate, Remote Sensing and Spatial Analytics Lab, Department c Computer Science, Information Technology University of the Punjab, Lahore Pakistan (01 December 2022 – 01 September 2023)

EDUCATION

National University of Sciences and Technology, Islamabad, Pakistan
M.Sc., Electrical (Telecommunication) Engineering May 202
CGPA: 3.95/4.00

University of Engineering and Technology, Peshawar, Pakistan
B.Sc., Telecommunication Engineering August 201
CGPA: 3.79/4.00

AWARDS

1. First prize in the EO4SDG Mini Project Competition 2022
The mini projects for Sustainable Development Goals competition are an initiative c the IEEE Geoscience and Remote Sensing Societies Technical Committee REAC (Remote sensing Environment, Analysis and Climate Technologies) to support scienc and to motivate local students to work together on a specific topic related to Eart Observation and Sustainable Development Goals (EO4SDG). The focus should be o local regional problems and how remote sensing can help to identify and quantif environmental/societal impact of a changing Earth.

2. Third prize in the Clean Tech Innovation Challenge 2022
Clean Tech Innovation Challenge (CIC) brings together students, researchers, faculty and experts in the field of energy generation, energy management to reduce cost an

emission, energy consumption, usage patterns, load forecasting, blockchain, renewable source of energy to solve the problems facing the country through cutting edge technology.

3. National Endowment Scholarship for Talent (NEST)

NEST provides scholarships to talented students, who do not have enough resource to continue their higher education. I was awarded this scholarship based on m academic scores to pursue my postgraduate studies at National University of Science and Technology, Pakistan.

4. President's Gold Medal

President's gold medal is awarded to undergraduate students who score a CGPA of a least 3.75 out of 4.00 and stand first in terms of marks obtained in all examinations. was awarded President's gold medal for securing highest CGPA during m undergraduate studies.

5. University Merit Scholarship

This scholarship is awarded to undergraduate students based on results of th preceding examinations. I was awarded university merit scholarship for securing firs position in each semester during undergraduate studies.

JOURNAL PUBLICATIONS

[1] **A. Basit**, M. A. Siddique, M. K. Bhatti, and M. S. Sarfraz, "Comparison of CNNs an Vision Transformers-Based Hybrid Models Using Gradient Profile Loss fo Classification of Oil Spills in SAR Images", *Remote Sensing* 2022, 14, 2085.

[2] **A. Basit**, A. Wakeel, A. Ahmad, M. Y. Umair, A. Mirza, M. Imran, and H. Z. Khar "Optimum Power Allocation for an Energy Harvesting Wireless Communication Systen Considering Energy Storage Losses," *Ad Hoc Networks*, vol. 144, p. 103138, 2023.

[3] M. A. Siddique, E. Naseer, M. Usama, and **A. Basit**, "Estimation of Surface-leve NO_2 using Remote Sensing & Machine Learning – A Review", *IEEE Geoscience an Remote Sensing Magazine, 2024 (Accepted, will be published in next issue).*

[4] **A. Basit**, M. A. Siddique, S. Bashir, E. Naseer, and S. Sarfraz, "Deep learning based Detection of Oil Spills in Pakistan's Exclusive Economic Zone between 2017 2023" *Remote Sensing Case Report, 2024 (Under review).*

CONFERENCE PUBLICATIONS

[1] **A. Basit**, M. A. Siddique, and M. S. Sarfraz, "Deep Learning Based Oil Spi Classification Using Unet Convolutional Neural Network", in *IEEE Internationa Geoscience and Remote Sensing Symposium (IGARSS)*, Brussels, Belgium, 2021, pp 3491-3494.

[2] **A. Basit**, M. K. Bhatti, M. Ali, T. Fatima, B. Minchew and M. A. Siddique, "Deep Learning for Monitoring Glacial Lakes Formation using Sentinel 2 Multispectral Data, in *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, Kuala Lumpur, Malaysia, 2022, pp. 179-182.

[3] E. Naseer, **A. Basit**, M. K. Bhatti, and M. A. Siddique, "Machine Learning for Area Wide Monitoring of Surface Level Concentration of NO2 Using Remote Sensing Data, in *International Conference on Emerging Trends in Electrical, Control, an Telecommunication Engineering (ETECTE)*. Lahore, Pakistan, 2022, pp. 1-6.

[4] M. A. Siddique, A. Basit, et al., "Towards Automated Monitoring of Glacial Lakes i Hindu Kush and Himalayas Using Deep Learning," in *IEEE International Geoscienc and Remote Sensing Symposium (IGARSS)*, Pasadena, CA, USA, 2023, pp. 2165 2168.

[5] M. A. Siddique, N. Qayyum, **A. Basit**, and E. Naseer, "GLOF Risk Assessmer using Logistic Regression of Remote Sensing Parameters in High Mountain Asia (*Accepted as oral presentation in IGARSS 2024).*

ACADEMIC SERVICE

1. Earth System Science Data
2. IEEE Transactions on Geoscience and Remote Sensing

PROGRAMMING SKILLS

1. Python 2. MATLAB 3. R (Basic) 4. JavaScript (Google Earth Engine)

Date: 31 May 2024