

NAHIAN AHMED

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Education

Doctor of Philosophy in Computer Science [Mar, 2021 - Present]
Oregon State University
Corvallis, OR 97333, USA
Advised by **Dr. Rebecca Hutchinson**

Bachelor of Science in Computer Science and Engineering [Jan, 2015 - Mar, 2019]
North South University
Dhaka 1229, Bangladesh

Research Interest

Machine Learning, Ecology, Computational Sustainability, Spatial Modeling

Skills and Expertise

Programming Languages

Python, R, MATLAB/Octave, Java, JavaScript, C, C++, Latex

Software and Tools

Earth Engine, QGIS, Vim/Vimscript, Git, Geospatial Data Abstraction Library (GDAL)

Professional Services

Program Committee Member and Reviewer

- **ICLR 2023** Workshop: Tackling Climate Change with Machine Learning
- **NeurIPS 2022** Workshop: Tackling Climate Change with Machine Learning

Grant Reviewer

- **Climate Change AI** Innovation Grants 2023

Reviewer

Remote Sensing of Environment
Ecological Indicators
IEEE Geoscience and Remote Sensing Letters
Remote Sensing Letters

Work Experience

Graduate Research Assistant [Mar, 2021 - Present]
School of Electrical Engineering and Computer Science
Oregon State University
under the supervision of **Dr. Rebecca Hutchinson**
Project: Machine learning and computational sustainability

Senior Research Assistant [Feb, 2019 - Mar, 2021]
Department of Electrical and Computer Engineering
North South University
under the supervision of **Dr. Mohammad Rashedur Rahman**
Projects : Machine Learning for Predicting Landslide Risk, Deep Learning based Building Extraction, Dense Prediction under Label Noise.

Research Assistant [Jan, 2018 - Dec, 2019]
Department of Environmental Science and Management
North South University
under the supervision of **Dr. Mohammad Sujauddin**
Projects: Automated Classification of Visual Pollutants, Human Appropriation of Net Primary Production in Bangladesh, Quantifying Forced Migration Induced Deforestation, Modeling Spatio-temporal Forest Cover Change

Teaching

Graduate Teaching Assistant
Oregon State University
BDS 211 **Use and Abuse of Data : Critical Thinking in Science** [Spring 2022, 2023]
CS 340 **Introduction to Databases** [Fall 2021]

Invited Speaker [Nov, 2020]
North South University
CSE 448 Neural Networks
Lectures on **Applying Machine Learning Models to Remotely Sensed Data**
Link to tutorial: <https://www.youtube.com/watch?v=67kzaqetL0gt=242s>

Invited Speaker [Oct, 2019]
North South University
ENV 419 Forest Management
Lectures on **Machine Learning and Remote Sensing in Forest Management**

Instructor [Oct, 2018]
North South University
Department of Environmental Science and Management
Workshop on **Computational Analysis for Research using Python**

Selected Publications

1. **Nahian Ahmed**, Rashedur M. Rahman, “[Label noise tolerance of deep semantic segmentation networks for extracting buildings in ultra-high-resolution aerial images of semi-built environments](#)”, **Geocarto International**, Volume 37, Issue 25, Pages 8062-8079, 2022.
2. Mustafizur Rahaman, Md Monsur Hillas, Jannatul Tuba, Jannatul Ferdous Ruma, **Nahian Ahmed**, Rashedur M Rahman, “[Effects of Label Noise on Performance of Remote Sensing and Deep Learning-Based Water Body Segmentation Models](#)”, **Cybernetics and Systems**, Volume 53, Issue 6, Pages 581-606, 2022.
3. **Nahian Ahmed**, Rashedur M. Rahman, Mohammed Sarfaraz Gani Adnan, Bayes Ahmed, “[Dense prediction of label noise for learning building extraction from aerial drone imagery](#)”, **International Journal of Remote Sensing**, Volume 42, Issue 23, Pages 8906-8929, 2021.
4. Mohammad Minhazul Alam, Md Gazuruddin, **Nahian Ahmed**, Abdul Motaleb, Masud Rana, Roman Riyadh Shishir, Sabrina Yeasmin, Rashedur M Rahman, “[Classification of Deep-SAT Images under Label Noise](#)”, **Applied Artificial Intelligence**, Volume 35, Issue 14, Pages 1196-1218, 2021.

5. **Nahian Ahmed**, Riasad Bin Mahbub, Rashedur M. Rahman, “[Learning to extract buildings from ultra-high-resolution drone images and noisy labels](#)”, **International Journal of Remote Sensing**, Volume 41, Issue 21, Pages 8216-8237, 2020.
6. **Nahian Ahmed**, M. Nazmul Islam, Ahmad Saraf Tuba, M. R. C. Mahdy, Mohammad Sujauddin, “[Solving visual pollution with deep learning: A new nexus in environmental management](#)”, **Journal of Environmental Management**, 248, 109253, 2019.
7. Mohammed Sarfaraz Gani Adnan, Md Salman Rahman, **Nahian Ahmed**, Bayes Ahmed, Md. Fazleh Rabbi, Rashedur M. Rahman “[Improving Spatial Agreement in Machine Learning-Based Landslide Susceptibility Mapping](#)”, **Remote Sensing**, Volume 12, Issue 2, Pages 3347, 2020.
8. **Nahian Ahmed**, Adnan Firoze, Rashedur M. Rahman, “[Machine learning for predicting landslide risk of Rohingya refugee camp infrastructure](#)”, **Journal of Information and Telecommunication**, Volume 4, Issue 2, Pages 175-198, 2020.
9. Riasad Bin Mahbub, **Nahian Ahmed**, Farah Yeasmin, “[Towards reducing the data gap in the conservation efforts for sea turtles in Bangladesh](#)”, **Regional Studies in Marine Science**, Volume 35, 101151, 2020.
10. **Nahian Ahmed**, Riasad Bin Mahbub, Mohammad Mosharraf Hossain, Mohammad Sujauddin, “[Modeling spatio-temporal changes of forest cover in the northeastern region of Bangladesh: context of traditional and co-management paradigms](#)”, **Journal of Tropical Forest Science**, Volume 32, Issue 1, Pages 42-51, 2020.
11. Riasad Bin Mahbub, **Nahian Ahmed**, Shupa Rahman, Mohammad Mosharraf Hossain, Mohammad Sujauddin, “[Human appropriation of net primary production in Bangladesh, 1700-2100](#)”, **Land Use Policy**, 87, 104067, 2019.
12. **Nahian Ahmed**, Safin Mahmud, M. M. Lutfel Elahi, Silvia Ahmed, Mohammad Sujauddin, “[Forecasting river sediment deposition through satellite image driven unsupervised machine learning techniques](#)”, **Remote Sensing Applications: Society and Environment**, Volume 13, Pages 435-444, 2019.
13. **Nahian Ahmed**, M. Naimul Islam, M. Ferdous Hasan, Tamanna Motahar, Mohammad Sujauddin, “[Understanding the political ecology of forced migration and deforestation through a multi-algorithm classification approach: the case of Rohingya displacement in the southeastern border region of Bangladesh](#)”, **Geology, Ecology, and Landscapes**, Volume 3, Issue 4, Pages 282-294, Taylor and Francis, 2019.