FIRUZ AHAMED NAHID

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CAREER OBJECTIVE

As an energy engineer, my primary objective is to leverage my passion for renewable energy, my expertise in energy innovation, efficiency, and cost optimization, and my ability to take calculated, proactive, and resolute measures to make meaningful contributions to sustainable energy projects or organizations. I aim to contribute to advancing low-carbon renewable energy solutions that will benefit society, the environment, and future generations. My networking and collaborative skills will also facilitate effective communication and coordination across diverse teams, stakeholders, and partners.

EXPERIENCE

September 2023 – Present   **Thailand**
Postdoctoral Researcher, SMARTS Center, SERD, Asian Institute of Technology

- Developing and comparing power system models for various regions to develop zero carbon energy sector pathway
- Conceptualizing transformative sustainable development changes, aligning with global benchmarks
- Engaging diverse communities and communicating research findings
- Assisting the Center Director, managing projects independently, and fostering multidisciplinary collaboration

March 2023 – August 2023   **Thailand**
Research Assistant, Smarts Lab, Asian Institute of Technology

- Take part in regular international training sessions on Power System Modelling.
- Working with Power sector/ Energy models using Python and/or R.
- Use PyPSA / Switch / Energy Rt Modelling to develop zero carbon pathways and scenarios in Power Sector for South East Asian countries.

December 2022 – February 2023   **Thailand**
Intern (Renewable Energy), Tractebel Engie

- Conduct Technical Due Diligence for Solar/Wind projects.
- EPC Contract Management.
- Carbon Neutrality Policy review for Solar/Wind project.
- Renewable Energy project coordination.

May 2019 – December 2019   **Bangladesh**
Senior Lecturer, International University of Business Agriculture and Technology – IUBAT

May 2016 – August 2017   **Bangladesh**
Lecturer, International University of Business Agriculture and Technology – IUBAT

- Deliver lectures at the undergraduate level.
- Organize seminars and workshops.
- Supervise intern and thesis students.
- Led multidisciplinary admin tasks.
- Academic Research on various fields of Electrical Engineering.

October 2015 – February 2016   **Bangladesh**
Assistant Engineer, Electrical, Universal Concept Ltd.

- Dealing with Sales and Marketing of Electrical Machines
- Preparing project proposals for clients
- Visiting and inspecting the running projects under the company.

May 2015 –August 2015   **Bangladesh**
Internship, Electrical, National Tubes Ltd.

- Taking care of electrical machine's maintenance
- Assist the production service line.

EDUCATION

Asian Institute of Technology   **Thailand**
Doctor of Engineering in Sustainable Energy Transition   **[Jan 2020 – August 2023 2023]**
CGPA: 3.72 / 4.00 (Course Work)

Asian Institute of Technology   **Thailand**
Master of Engineering in Energy   **[August 2017 – May 2019]**
CGPA: 3.40/4.00

International University of Business Agriculture and Technology – IUBAT   **Bangladesh**
Bachelor of Science in Electrical and Electronic Engineering   **[Jan 2012 – Sep 2015]**
CGPA: 3.97 / 4.00

SOFTWARE SKILLS

Energy Modelling: *PypSa, Energy RT, Switch*
Power System Design: *MATLAB (Simulink, Psat, Matpower), Power Factory, DIgSILENT, Power World Simulator.*
Renewable Energy System Planning and Design: *Ret-Screen, Homer.*
Machine Learning Network Design: *MATLAB (Coding, Toolbox), Python (Keras, Tensor Flow)*
Electrical and Electronic Circuit Design: *MATLAB, Microsoft Visio, PSIM, P- Spice*

PROFESSIONAL TRAINING

Jointly by UPES, India and AIT, Thailand   **Online Mode**
Faculty Development Program on Artificial Intelligence and Machine Learning Using MATLAB for Renewable Energy Applications   **[May 15th – May 19th 2023]**

Bangladesh Agricultural University   **Bangladesh**
Training on Teaching-Learning, Curriculum and Quality Assurance   **[July 11th – July 15th 2016]**

International University of Business Agriculture and Technology – IUBAT   **Bangladesh**
Training on Advanced Programmable Logic Control   **[May 2015 – August 2015]**

ACHIEVEMENT

Merit Scholarship at the point of admission (100% Tuition Waiver)
Organization: IUBAT - International University of Business Agriculture and Technology

6th position in Inter University Math. Olympiad
Organization: East-West University

H. M. The Queens Scholarship (Masters in Energy)
Organization: Asian Institute of Technology

The Bangchak Scholarship (PhD in Sustainable Energy Transition)
Organization: Bangchak Petroleum Ltd

PUBLICATIONS

Book Chapter:
Nahid, F. A., Ongsakul, W., Madhu M., N., & Laopaiboon, T. (2020). Hybrid Neural Networks for Renewable Energy Forecasting: Solar and Wind Energy Forecasting Using LSTM and RNN. In Vasant, P., Weber, G., & Punurai, W. (Ed.), Research Advancements in Smart Technology, Optimization, and Renewable Energy (pp. 200-222). IGI Global. http://doi:10.4018/978-1-7998-3970-5.ch011

Peer Reviewed Journal:
Nahid, F. A., Ongsakul, W., & Manjiparambil, N. M. (2023). Short-term multi-steps wind speed forecasting for carbon neutral microgrid by decomposition-based hybrid model. Energy for Sustainable Development, 73, 87-100.https://doi.org/10.1016/j.esd.2023.01.016

Nahid, F. A., Chowdhury, H. M., & Jahangir, M. N. (2019). Solar Radiation Forecasting Using Hybrid Convolutional Long Short-Term Memory Neural Network. Journal of Research in Physics and Applied Sciences, 2(2), 1–13. https://doi.org/10.5281/zenodo.3768721

Nahid, F. A., Alam, M. J., Akter, K., (2019). Multi Step Ahead Wind Speed Forecasting Using Long Short-Term Memory Recurrent Neural Network IUBAT Review 2 (1): 31-40. https://iubat.edu/journal

Akter, K., Nahid, F. A., & Islam, N. (2019). Open Loop Analysis of a High-Performance Input Switched Single Phase AC-DC Boost Converter. Journal of Electrical and Electronics Engineering, 6(7), 6–11. https://doi.org/10.14445/23488379/IJEEE-V6I7P102

Alam, M. J., **Nahid, F. A.,** & Islam, M. T., (2019). Design of a Broad Band – Stop Filter with Metamaterial as Defective Ground System. IUBAT Review 2 (1): 41-48. https://iubat.edu/journal

Conference Proceedings:

Nahid, F. A., Ongsakul, W., & Manjiparambil, N. M. (2020). Very Short-Term Wind Speed Forecasting Using Convolutional Long Short-Term Memory Recurrent Neural Network. 2020 International Conference and Utility Exhibition on Energy, Environment and Climate Change (ICUE), 1–8. https://doi.org/10.1109/ICUE49301.2020.9307061

Akter, K., Islam, M. N., **Nahid, F. A.**, & Soheli, S. N. (2021). Comparative Analysis and Exploration of a High Gain Input Current Shaped AC-DC Step-Up Converter with Feedback Controller. 2021 2nd International Conference on Robotics, Electrical and Signal Processing Techniques (ICREST), 253–258. https://doi.org/10.1109/ICREST51555.2021.9331180

REFERENCE

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