Updated: August 14, 2020

Contact Information Phone: +880 18 6082 6446

E-mail: asif.neloy@northsouth.edu neloyn@myumanitoba.ca

Website: https://aaneloy.netlify.app/

Additional Resource: LinkedIn, Google Scholar, Research Gate, GitHub, Kaggle

Career Interest Seeking a position in Data Science, Data Analysis, Algorithms, Data Structure and Robotics where extensive experience will be further developed and utilized. Skilled in Machine Learning, Probabilistic Statistics, Industrial Problem-Solving, Business Data visualization and Analysis and creative thinking. Commitment to providing support and essential information about trends to companies in a variety of industries and academics.

Research Interest My primary field of research interest is **Artificial Intelligence (AI)**. Within AI, I am interested in problems related to **Probabilistic Modeling**, **Applied Machine Learning**, **Health Data Mining**, and interdisciplinary applications of **Computer Vision** in Robotics. My research revolves around understanding the fundamental principles of statistical machine learning, designing scalable algorithms with guarantees, and rigorously analyzing their computational and information-theoretic properties. Moreover, with the help of modeling and scheme of AI, I have also a substantial overview in the field of Robotics, more precisely – **Design Analysis**, **Path Finding**, **Robot Vision**, **Object Tracking** and application of **Probabilistic Models** to the Segmentation problem.

Education

North South University (NSU)

January 2015 – December 2018

Bashundhara R/A, Dhaka 1229, Bangladesh

- Bachelor of Science in Computer Science and Engineering (BS CSE)
- Specialized Trail— Artificial Intelligence
- Thesis— Early Health Prediction System for ICU Patient using Machine Learning and Cloud Computing

Govt. Ananda Mohan College

July 2012 - July 2014

Mymensingh Sadar 2200, Mymensingh, Bangladesh

- Higher Secondary School Certificate (HSC)
- (GPA 5.00/5.00)
- Group Science

Mymensingh Zilla School

January 2005 - March 2012

Mymensingh Sadar 2200, Mymensingh, Bangladesh

- Secondary School Certificate (SSC)
- (GPA 5.00/5.00)
- Group Science

Employment History

Information Analyst

Advanced Chemical Industries (ACI Ltd.)

January 2020 - Present

ACI Centre 245, Tejgaon Industrial Area, Dhaka-1208, Bangladesh.

- Interpret and translate data into valuable information using different machine learning models for effective analysis purposes.
- Analyze client's requirements to provide suggestions in order to deliver products that are aligned with the ultimate business requirement.
- Oversee implementation of a new system, support users in adapting to the system by ensuring proper training and guidelines.

Laboratory Officer

Dept of ECE, North South University

May 2019 – Present

Bashundhara R/A, Dhaka 1229, Bangladesh.

- Responsible for conducting the lab classes of the enrolled students.
- Lab Coursework includes implementing algorithms and theoretical concepts with respective programming languages as deemed necessary by the course curriculum.
- Also responsible for grading and marking the students in their lab classes.

Undergraduate Teaching Assistant (UGA)

Dept of ECE, North South University

January 2019 - May 2019

Bashundhara R/A, Dhaka 1229, Bangladesh.

- Facilitate a discussion section or tutorial; hold weekly office hours; grade homework, programming assignments, exams, or projects; keep records; distribute and copy reading materials; prepare answer keys or supplementary notes, and act as the course web-master.
- Assisting faculty with record keeping, such as tracking attendance and calculating grades.

Founding Secretary and Vice President

NSU ACM Student Chapter

December 2017 – January 2019

SAC (10th Floor), North South University, Bashundhara R/A, Dhaka 1229, Bangladesh.

- As a Secretary and Vice-Chair, I have managed all the administrative workflows, operational duties and workshop during the fiscal year 2017-2019. I also received Recognition of Service Award from ACM NY HQ.
- Certified Trainer of Robotics and Data Science of the NSU ACM Student Chapter from February 2017 to 2019.
- Undertook workshops on Machine Learning, Basic Robotics, PCB Design and Robot Operating System (ROS).

Teaching

North South University

Bashundhara R/A, Dhaka 1229, Bangladesh.

January 2019 - Present

Course	Semester
CSE231L Digital Logic design	Summer 2019
CSE332L Computer Organization and Architecture	Summer 2019
CSE482L Internet and Web Technology	Summer 2019
CSE115L Programming Language I	Summer 2019
CSE331L Microprocessor Interfacing & Embedded System	Spring 2019, Fall 2019, Spring 2020
CSE311L Database Management System	Spring 2020

Academic Honours and Awards

- Certified Mentor of Robotics and Machine learning.
- Won the 1st Runner Up prize for the Undergraduate Capstone Project, Capstone Innovation Challenge, Season 6, 2018.
- Runner up IEEE day Hackathon 2017.
- Junior Board Scholarship (Class 8) for excellent academic result.

Technical Skills

Programming and Scripting Languages: Python, C++, C, HTML, XML, SQL, Julia, R,

Assembly, Windows Azure, Shell Scripting. Operating Systems: Windows, Linux.

Data Science Tools: Tableau, SPSS, MATLAB, Apache Spark. Anaconda Libraries: TensorFlow, PyTorch, Keras, Pandas, Scikit-learn, Scipy, NLTK Platforms: IBM Cloud, IBM Watson Studio, PyCharm, GIT, Docker, Arduino.

Database Tools: Oracle, MySql, DB2, MS-Access

Workshop or Seminar Conducted

- Workshop on Robotics (Robo101): NSU ACM Student Chapter, Conducted during Spring 2017, Fall 2017, Summer 2018.
- Workshop on Intro to Machine Learning: NSU ACM Student Chapter Fall 2018
- Hour of Code: Association for Computing Machinery (ACM) Fall 2018

Professional Activities

• IEEE Student Member: 94560705 • ACM Student Member: 9654439

Research Facility Founder and Principal Investigator, TF-ROS Lab

February 2019 - Present

North South University, Bashundhara R/A, Dhaka 1229, Bangladesh.

- Members: 6 undergraduate students of North South University.
- Funding: BDT 500000 by Desire Glance Group for the fiscal year 2018-2019.

Language **Proficiency**

IELTS: 7.5 (W,R–7.00, L,S–8.00)

Reviewing Experience

Conference:

- 2020 International Symposium on Automation, Information and Computing (ISAIC 2020). Beijing Jiaotong University, Beijing, China, December 2nd-4th, 2020.
- 2019 The Fourth International Conference on Economic and Business Management (FEBM **2019**). China October 19-21, 2019.

Journals:

- CAAI Transactions on Intelligence Technology (2020)
- IEEE Access (2020)

Book Published

• "Let's make Robots", Publisher - Pinnacle Media, Publishing Year - November 2017. ISBN 978-984-34-3061-8.

Publications

Refereed Journal:

- Neloy, A. A., Bindu, R. A., Alam, S., Haque, R., Khan, M. S. A., Mishu, N. M., & Siddique, S. (2020, November). Alpha_N-V2: Shortest Path Finder Automated Delivery Robot with Real-Time Object Detection and Avoiding System. Vietnam Journal of Computer Science (VJCS), Issue-7, No 4, Nov 2020.DOI: https://doi.org/10.1142/S2196888820500219
- Neloy, A. A., Arman, A., Islam, M. S., & Motahar, T. (2018). Automated Mobile Robot with RFID Scanner and Self Obstacle Avoiding System. *International Journal of Pure and Applied Mathematics*, 118(18), 3139-3150. (pdf)

Book Chapter:

- Neloy, A. A., Bindu, R. A., Alam, S., Haque, R., Khan, M. S. A., Mishu, N. M., & Siddique, S. (2020, March). Alpha-N: Shortest Path Finder Automated Delivery Robot with Obstacle Detection and Avoiding System. In Asian Conference on Intelligent Information and Database Systems, (pp. 202-213). Springer, Cham.DOI: https://doi.org/10.1007/978-3-030-41964-6_18
- Neloy A.A., Shafayat Oshman M., Islam M.M., Hossain M.J., & Zahir Z.B. (2019). Content-Based Health Recommender System for ICU Patient. In: Chamchong R., Wong K. (eds) *Multi-disciplinary Trends in Artificial Intelligence*. MIWAI 2019. Lecture Notes in Computer Science, vol 11909. Springer, Cham. DOI: https://doi.org/10.1007/978-3-030-33709-4_20

Peer-Reviewed Conference Paper:

- Bindu, R. A., Neloy, A. A., Alam, S., Moni, N. J., & Siddique, S. (2019, November). Sigma-3: Integration and Analysis of a 6 DOF Robotic Arm Configuration in a Rescue Robot. In 2019 4th International Conference on Robotics and Automation Engineering (ICRAE) (pp. 6-11). IEEE. DOI: https://doi.org/10.1109/ICRAE48301.2019.9043799
- Neloy, A. A., Alam, S., Bindu, R. A., & Moni, N. J. (2019, April). Machine Learning based Health Prediction System using IBM Cloud as PaaS. In 2019 3rd International Conference on Trends in Electronics and Informatics (ICOEI) (pp. 444-450). IEEE. DOI: https://doi.org/10.1109/ICOEI.2019.8862754
- Bindu, R. A., Alam, S., & Neloy, A. A. (2019, March). A Cost-Efficient Multipurpose Service Robot using Raspberry Pi and 6 DOF Robotic Arm. In Proceedings of the 2019 2nd International Conference on Service Robotics Technologies (pp. 16-22). DOI: https://doi.org/10.1145/3325693.3325701
- Neloy, A. A., Haque, H. S., & Ul Islam, M. M. (2019, February). Ensemble Learning Based Rental Apartment Price Prediction Model by Categorical Features Factoring. *In Proceedings of the 2019 11th International Conference on Machine Learning and Computing* (pp. 350-356). DOI: https://doi.org/10.1145/3318299.3318377

Preprint:

- Bindu, R. A., Neloy, A. A., Alam, S., & Siddique, S. (2020). 3-Survivor: A Rough Terrain Negotiable Teleoperated Mobile Rescue Robot with Passive Control Mechanism. arXiv preprint arXiv:2003.05224.
- Neloy, A. A., Oshman, M. S., Islam, M. M., Hossain, M. J., & Zahir, Z. B. (2019). Early Health Prediction System for ICU Patient using Machine Learning and Cloud Computing. (No. 1590). EasyChair.

PersonalCitizenshipBangladeshiMarital StatusMarried

Love to ${\it Walk/Run/Playing \ Games, \ read \ books,}$

Cook for others (occasionally), Travel

References Academic and Professional reference available upon request.