Asif Ahmed Neloy

Curriculum Vitae

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**	January 2019 – Present

Bashundhara R/A, Dhaka 1229, Bangladesh.

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**. Accepted for publication in – *Vietnam Journal of Computer Science (VJCS)*, Issue-7, No 4, Nov 2020. (**Preprint**)

• **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.

Personal	Citizenship	Bangladeshi
	Marital Status	Married
	Love to	Walk/Run/Playing Games, read books, Cook for others (occasionally), Travel

References	**Academic and Professional reference available upon request.**