

Updated: *September 6, 2020*

### Contact Information

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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)**  
Bashundhara R/A, Dhaka 1229, Bangladesh

January 2015 – December 2018

- **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**  
Mymensingh Sadar 2200, Mymensingh, Bangladesh

July 2012 - July 2014

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

**Mymensingh Zilla School**  
Mymensingh Sadar 2200, Mymensingh, Bangladesh

January 2005 – March 2012

- **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.

### Research Assistant

[Dept of ECE, North South University](#)

January 2019 – Present

Bashundhara R/A, Dhaka 1229, Bangladesh.

- Implementing the mechanical design of coupling parts in robotic systems.
- Support the design of materials for the design of rescue robots.
- Work on a research project on the implementation of the navigation algorithm to mobile robots
- Development of code and experimental platforms, running experiments, and analyzing data using machine learning.

### 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 (10<sup>th</sup> 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**

CSE231L Digital Logic design

CSE332L Computer Organization and Architecture

CSE482L Internet and Web Technology

CSE115L Programming Language I

CSE331L Microprocessor Interfacing &amp; Embedded System

CSE311L Database Management System

**Semester**

Summer 2019

Summer 2019

Summer 2019

Summer 2019

Spring 2019, Fall 2019, Spring 2020, Summer 2020

Spring 2020, Summer 2020

**Academic  
Honours and  
Awards**

- Certified Mentor of [Robotics](#) and [Machine learning](#).
- Won the [1<sup>st</sup> 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.

**Journal:**

- **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., Alam, S., Bindu, R. A., (2020, August). Design and Implementation of a Novel Hybrid Rental Apartment Recommender System. *Advances in Data Science and Adaptive Analysis*. DOI: <https://doi.org/10.1142/S2424922X2041003X>**
- **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](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](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.**