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## Areas of Work & Interest

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Artificial Intelligence | Computer Science | Computer Science and Engineering | Computer Vision |  
Human-Computer Interaction | Human-Centered Machine Learning | Data Analytics | Machine Learning |  
Software Testing and Validation

## Education

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| <b>North South University</b><br>• <i>Bachelor of Science in Computer Science and Engineering</i><br><i>Overall CGPA: 3.56 on a scale of 4.00 (Cum Laude)</i> | Dhaka, Bangladesh<br><i>Jan. 2016 – Jan. 2020</i> |
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## Experience

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| <b>Therap (BD) Ltd.</b><br>• <i>Associate Software Engineer, QA</i> <ul style="list-style-type: none"><li>◦ <b>Responsibilities:</b><ul style="list-style-type: none"><li>* Reviewing quality specifications and technical design documents to provide timely and meaningful feedback.</li><li>* Creating detailed, comprehensive and well-structured test plans and test cases.</li><li>* Estimating, prioritizing, planning and coordinating quality testing activities.</li></ul></li></ul>                  | Dhaka, Bangladesh<br><i>Aug. 2020 - Present</i>   |
| <b>Banglalink Digital Communications Ltd.</b><br>• <i>Virtual Service Assurance Intern</i> <ul style="list-style-type: none"><li>◦ <b>Responsibilities:</b><ul style="list-style-type: none"><li>* Complied with all lawful and reasonable directions and instructions given by officers or employees of Company during the course of the Internship.</li><li>* Learned about the service assurance operation of Banglalink Network.</li></ul></li></ul>  | Dhaka, Bangladesh<br><i>Jul. 2020 - Aug. 2020</i> |
| <b>North South University</b><br>• <i>Teaching Assistant</i> <ul style="list-style-type: none"><li>◦ <b>Responsibilities:</b><ul style="list-style-type: none"><li>* Supported student learning objectives through personalized and small group assistance to support classroom instructions.</li><li>* Reviewed students' progress using different methods, analysis of test scores and homework completion.</li><li>* Assisted teachers with supervision and care of university students.</li></ul></li></ul> | Dhaka, Bangladesh<br><i>Jan. 2019 - Jun. 2020</i> |

## PUBLICATIONS(MANUSCRIPTS UNDER REVIEW)

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- [1] **Progga, F.T., Shahria, M. T., Arisha, A., & Ahmed, M.U. A Deep Learning Based Approach to Child Labour Detection.** *6th Information Technology International Seminar Virtual Conference 2020 (ITIS2020).* IEEE.
- [2] **Progga, F.T., Shahria, M. T., & Ahmed, N. The Effectiveness and Acceptance of Collaborative E-learning in the Context of Bangladesh.** *In 2020 IEEE International Conference on Engineering, Technology and Education (TALE2020).* IEEE.

## Research Works & Projects

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- **A Deep Learning Based Approach to Child Labour Detection:** Considering the unavailability of open sourced child labourers data-set in the context of the South Asian region a noble data-set of such kind has been formulated in this project. A child labour recognizing model has been built based on CNN using the data-set. Additionally, using two well-known transfer learning methods, the resulting accuracy has also been compared for better perception.
- **Application of Deep Learning Techniques: Domestic Violence Detection:** The project beholds the idea of detecting domestic violence incidents by dint of deep learning techniques and giving the victims immediate relief from that situation by notifying predefined contacts after video classification.
- **Human Exploration Rover:** We designed a rover mimicking the famous Mars rover Curiosity. It was designed to navigate in hard terrains and was meant to be tele-operated by a user from a distance. The rover was fitted with a 4 axis robotic arm, capable of doing a variety of tasks. The rover had an IP camera that streams live video to the user end.

## Honors & Awards

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- **Finalist:** *NASA Human Exploration Rover Challenge 2019, Huntsville, Alabama, USA; Youth Innovation Competition on Global Governance (YICGG) 2019, Jakarta, Indonesia; IEEE YESIST12-Age of Innovation 2019, Bangkok, Thailand.*
- **Selected Participant:** *ACM SIGCHI Summer School 2019, North South University, Dhaka, Bangladesh;* A summer school is a program of lectures, classes, tutorials, hands on technology sessions, exercise or group work arranged by a group of SIGCHI members for the benefit of SIGCHI student members.
- **Invited Participant:** *WePower Conference 2019 by World Bank, Kathmandu, Nepal;* An international manifesto for celebrating the Women Power specifically the power of women in technical sectors of South Asia.
- **1st Runner-up:** *Arduino Day Celebration: "The Arduino Generation 2019" by IEEE NSU RAS Student Branch Chapter;* A local project showcase and poster competition for celebrating Arduino Day.
- **General Stipend:** *By the Government of Bangladesh;* Got a General Stipend from the Government of Bangladesh at School and College level for academic excellence.

## Leadership Experience

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- **Treasurer (Jan. 2018 - Jan.2020):** Served as the treasurer of the *IEEE North South University Women in Engineering Affinity Group Student Branch.*
- **Secretary (Jun. 2018 - Jun. 2019):** Served as the secretary of the *IEEE North South University Industry Application Society Student Branch Chapter.*

## Co-curricular Activities

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- **Organizer:** Served as an organizer in IEEE Student Professional Awareness Conference (SPAC) 2018 at NSU.
- **Activities:** Debating, Public Speaking, Camping, Volunteerism (IEEE Bangladesh Section, Bangladesh Girls' Guide Association.)

## Coursework

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Operating Systems | Computer Networking | Software Engineering | Database Management System | Data Structure & Algorithm | Embedded System Design | Linear Algebra | Engineering Mathematics | Probability & Statistics | Deep Learning (Coursera)

## Skills

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- **Programming Skills:** Python, C, C++, Java, PHP.
- **Machine Learning Libraries:** scikit-learn, pandas, numpy, matplotlib.
- **Deep Learning Libraries:** Keras, Tensorflow.
- **Hardware Skills:** Micro-controllers/processors, Sensors and Actuation.
- **Software:** CodeBlocks, Eclipse, Sublime, Proteus, Arduino IDE, JUnit, Jira, Selenium.