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## Education

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- **Marquette University** Dhaka, Bangladesh  
*Doctor of Philosophy in Computer Science* Aug. 2021 – Present
- **North South University** Dhaka, Bangladesh  
*Bachelor of Science in Computer Science and Engineering* Jan. 2016 – Jan. 2020  
*Overall CGPA: 3.56 on a scale of 4.00 (Cum Laude)*

## Areas of Work & Interest

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Human-Computer Interaction | Human-Centered Machine Learning | Data Analytics | Machine Learning |  
Software Testing and Validation

## Experience

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- **Marquette University** Milwaukee, WI, USA  
*Graduate Research Assistant* Aug. 2021 - Present
  - **Responsibilities:**
    - \* Conducting researches on Human-Computer Interaction at **Social & Ethical Computing Lab.**
- **Therap (BD) Ltd.** Dhaka, Bangladesh  
*Associate Software Engineer, QA* Aug. 2020 - July 2021
  - **Responsibilities:**
    - \* Reviewing quality specifications and technical design documents to provide timely and meaningful feedback.
    - \* Creating detailed, comprehensive and well-structured test plans and test cases.
    - \* Estimating, prioritizing, planning and coordinating quality testing activities.
- **Banglalink Digital Communications Ltd.** Dhaka, Bangladesh  
*Virtual Service Assurance Intern* Jul. 2020 - Aug. 2020
  - **Responsibilities:**
    - \* Complied with all lawful and reasonable directions and instructions given by officers or employees of Company during the course of the Internship.
    - \* Learned about the service assurance operation of Banglalink Network.
- **North South University** Dhaka, Bangladesh  
*Teaching Assistant* Jan. 2019 - Jun. 2020
  - **Responsibilities:**
    - \* Supported student learning objectives through personalized and small group assistance to support classroom instructions; Reviewed students' progress using different methods, analysis of test scores and homework completion; Assisted teachers with the supervision of the students.

## PUBLICATIONS

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- [1] **Progga, F.T., Shahriar, H., Zhang, C., & Valero, M. AI and Blockchain for Vehicular Network: A Review.** In *Artificial intelligence and Blockchain for Future Cybersecurity Applications by Springer "Studies in Big Data"*. Springer.
- [2] **Shahria, M. T., Progga, F.T., Arisha, A., & Ahmed, S. Application of Neural Networks for Detection of Sexual Harassment in Workplace.** In *2021 IEEE International Conference on Advances in Electrical, Computing, Communications and Sustainable Technologies (ICAECT 2021)*. IEEE.

- [3] **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.
- [4] **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.

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## Research Works & Projects

- **Designing Technology for enhancing Perinatal Mental Health Support:** Because of the considerable inaccessibility to in-person mental healthcare for the perinatal period, recent years have led to research on the usefulness of varying technologies to provide alternatives to in-person healthcare. These technologies range from phone- or video-calls with health providers to self-guided therapeutic mobile applications; the goal of my research is to review the current existing technologies for perinatal mental healthcare to answer the specific research questions and thus, building a new technology to assess those vulnerable mothers. This project is supervised by **Dr. Sabirat Rubya**.
- **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.

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## Honors & Awards

- **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.

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## Leadership Experience

- **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.*

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## Co-curricular Activities

- **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.)

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## Skills

- **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.
- **Data Analysis Skills:** Qualitative Analysis, Quantitative Analysis, Ground Theory.