

# Muhana Begum

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## SKILLS

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- Technical Tools: **AutoCAD, SOLIDWORKS, Bootstrap, WordPress, MacOS, iOS, Windows**
- Programming Languages: **C++, C, Python, JavaScript, Ruby, PHP, Visual Basic 6.0, VBA, VHDL**
- Other: **MS Word, Excel, PowerPoint, HTML, CSS, Visual Studio**

## EXPERIENCE

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### Student Intern

July 2018 – August 2018

Nemetz (S/A) & Associates, Toronto

- Demonstrated a thorough technical proficiency with **AutoCAD** by simplifying **electrical layout drafts** and modelling mechanical components for company publications
- Completed and filed field reports, technical reports, and administrative tasks using MS Word & Excel to a high degree of professionalism, which were later published internally and externally
- Took charge in reorganization of company reports to improve record collection

### Outreach Director – Robotics Team

Nov 2015 – June 2019

FIRST Robotics Canada – Riverdale Collegiate Institute, Toronto

- Applied exceptional **leadership** and interpersonal skills in order to confidently lead the team to win the **Entrepreneurship Award** at regional and provincial competitions in 2019
- Promoted the team to sponsors, leading to a total **accumulation of over \$20,000** in funding for the team
- Took **initiative** and headed all finance and administrative work, displaying strong written and verbal communication skills

### Teaching Assistant

Sept 2015 – May 2019

Yonge Street Mission Computer Literacy Lab, Toronto

- Designed a beginner level **LEGO robotics curriculum** used for 2+ years
- Taught and assisted in classes about **graphic design, LEGO robotics**, and advanced computer skills to 50+ elementary & middle school students
- Demonstrated a large breadth of technical knowledge by maintaining, updating, and improving **computer lab systems**

## PROJECTS

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### RC4 Cryptography Implementation – C++

- Demonstrated a foundational understanding of logical operations in **C++** and **base85 encoding** in order to recreate the **RC4 encryption scheme**
- Implemented user input and output for encrypted messages using string and array manipulation
- Gained a basic understanding in cryptography, internet security and privacy

### Spring Launch from a Catapult – Visual Basic

- Collected raw data on distance achieved by the launching of a spring on a catapult
- Effectively **analyzed data** to create a mathematical representation of experimental results
- Implemented and **derived various mathematical equations** to create a program using **Visual Basic** that achieves 98% accuracy in determining how far any given spring will launch

## CLUBS

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- University of Waterloo Electrical & Computer Engineering Ambassador Oct 2019

## ACHIEVEMENTS

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- Clifton Foundation Full Tuition Scholarship July 2019
- Bilingual Certification (English & French) – Riverdale Collegiate Institute June 2019

## EDUCATION

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### Candidate for Bachelor of Applied Science – Honours **Electrical Engineering (Co-op)**

University of Waterloo

Sept 2019 – May 2024