

# Mohsin Haider

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## OVERVIEW

Creative and collaborative undergraduate with practical experience in design, prototyping, and machine operation. Demonstrated ability in communicating complex topics in a clear and effective way to a broad audience.

- Programming: Python, Arduino, GitHub, Heroku, some experience with MATLAB
- Design Tools: Illustrator, Inkscape, Fusion 360
- Prototyping: Laser Cutting, Waterjet, 3D Printing, CNC Milling, CAM
- Soft Skills: Communication, Problem Solving, Flexibility

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## EDUCATION

**Bachelor of Science in Engineering**

Expected May 2022

**Mechanical Engineering Intent**

Pratt School of Engineering, Duke University, Durham, NC

GPA: 3.8

**High School Diploma**

May 2018

Raleigh Charter High School, Raleigh, NC

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## RELEVANT COURSEWORK

- Calculus I, II, and III
- Fundamental Engineering Design
- Introductory Chemistry
- Linear Algebra
- Introductory Programming
- Introductory Biology

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## PROFESSIONAL EXPERIENCE

**Innovation Co-Lab Studio, Duke University**

Durham, NC

**Co-Lab Staff**

Aug 2018 — Present

- Troubleshoot, repair, and maintain fleet of 75 3D printers in Duke University's Co-Lab Studio (Makerspace)
- Instruct students on how to operate 3D printers, water jet cutters, laser cutters, and CNC machines
- Advise wide variety of clients on best methods to utilize Co-Lab machines for their projects

**Mathnasium**

Raleigh, NC

**Instructor**

Sep 2017 — May 2018

- Taught two to four students at a time as they independently learned new topics using the Mathnasium Curriculum
- Provided homework help on a range of topics from elementary math to calculus

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## PROJECTS

**Museum of Life and Science, Duke University (Freshman Engineering Project)**

Durham, NC

**Project: Automatic Skunk Feeder**

Aug 2018 — Dec 2018

- Designed and constructed, with three other students, a feeder for small mammals in captive enclosures that dispenses food at random times in variable locations
- Initially created device for skunks but is being applied for use with chinchillas, possums, and lemurs at the museum

**Discord Bot (Independent Side Project)**

Aug 2017-Mar 2018

- Developed, using pre-existing python modules, a bot for chat application Discord that plays rock paper scissors, manipulates text inputs, and responds contextually to user input phrases
- Acquired knowledge of Python programming language, Windows command line, GitHub, and Heroku

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## VOLUNTEER AND LEADERSHIP EXPERIENCE

**Programming Club, Raleigh Charter High School**

Raleigh, NC

**President and Founder**

Aug 2017— May 2018

- Developed and taught lessons on J, Python, and HTML to club members with varying experience levels
- Managed a scheduling program for an annual event and facilitated a school-wide transition from J to Python

**IT Department, Raleigh Charter High School**

Raleigh, NC

**Tech Volunteer**

Jun 2016— Aug 2016

- Spent 10 hours a week performing maintenance and administrative duties for the school's IT Department
- Replaced LCD screens on Chromebooks and systematically wiped over 40 hard drives