Mohsin Haider

https://mohsinh.com/

OVERVIEW

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

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

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

PROFESSIONAL EXPERIENCE

DesignHub, Duke University Durham, NC
Design Engineer Aug 2019 — Present

- Design products, mechanisms, and prototypes for DesignHub clients as a contract engineer
- Develop important client ideas into functional products through structured project management
- Currently working on a smart toilet seat (see below)

Innovation Co-Lab Studio, Duke University Durham, NC
Co-Lab Staff Aug 2018 — Aug 2019

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

PROJECTS (see more on website above)

The David Lab at Duke University Durham, NC
Project: Smart Toilet Seat Jun 2019 — Present

- Leading mechanical development and testing for a smart toilet seat device to be used in hospitals
- Designing and creating sensor mechanisms, seat prototypes, automated testing rigs and validation devices
- Gaining experience in biomedical device design and regulations, patents, and mechanical design

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

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

RELEVANT COURSEWORK

- Calculus I, II, and III
- Fundamental Engineering Design
- Mechanics of Solids
- Linear Algebra, Differential Equations
- Introductory Programming
- Physics: Mechanics, Electricity, Magnetism