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, SolidWorks, 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 Mechanical Engineering — Expected May 2022
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)

Pratt School of Engineering, Duke University — Durham, NC
Lab Teaching Assistant for EGR101 — Aug 2019 — Present

- Serve as a lab teaching assistant for EGR101, Pratt's introductory design course for engineers
- Educate students on usage of prototyping tools and proper fabrication methods while maintaining safety
- Provide design advice to freshman at various skill and experience levels

Innovation Co-Lab Studio, Duke University — Durham, NC
Student Technician — 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)

Duke Department of Ophthalmology — Durham, NC
Project: Eye Forceps — Nov 2019 — Present

- Developing a patent-bound novel surgery tool that will make a common surgery quicker and more efficient
- Creating animations, simulations, and drawings for patent documentation and idea communication
- Designing renders and functional prototypes of the tool using SolidWorks and advance additive manufacturing

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

- Leading mechanical development and testing for a patent-pending, market-bound biomedical device
- Designing and creating sensor mechanisms, device prototypes, automated testing rigs and validation devices
- Gaining experience in biomedical device design and regulations, patents, and mechanical design

RELEVANT COURSEWORK

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