Current: Cambridge, MA
Home: Richardson, TX

Sameen Ahmad

972-901-0135
sameen_a@mit.edu
sameenahmad.com

Education

Massachusetts Institute of Technology, Cambridge, MA

- Candidate for Bachelor of Science in Electrical Engineering & Computer Science and Mechanical Engineering
- Coursework: Power Electronics, Digital Systems Lab, Circuits and Electronics, Robotics Science and Systems, Mechanics and Materials, Dynamics and Controls, Thermal-Fluids Engineering, Design and Manufacturing
- GPA: 4.8/5.0

Skills

Software: Python, C/C++, Assembly, Git, Linux, Verilog/System Verilog, ROS2, KiCad, Altium, LTspice, Logic Analyzer, OpenCV, Drake, ML, OnShape, SolidWorks, FEA

Technical: Soldering, Oscilloscope, TIG Welding, 3D Printing, Drill Press, Bandsaw, Belt Sander, Laser Cutter, CNC Mill, Lathe

Experience

REV Robotics, Carrolton, TX **May - August 2025**

Mechanical Engineering Intern

- Designed and prototyped 20 consumer products for First Robotics Challenge competitions using SolidWorks and OnShape; presented and defended data-informed design decisions during design reviews
- Created production drawings with GD&T; conducted tolerance stack-up, FEA, and DFM/DFA analysis for injection-molded, die-cast, and machined parts
- Fabricated intake parts for a test robot using a lathe, vertical bandsaw, and laser cutter

Sensori Robotics, Irving, TX **June - August 2024**

Software Engineering Intern

- Developed tools to automate image annotations (increasing efficiency by 92%) and performed R&D for generic obstacle detection using MiDaS, Florence-2, and Grounding DINO; integrated models into robot
- Soldered control boards, interpreted schematics, and verified firmware on MCUs using an oscilloscope

MIT Improbable AI Lab, Cambridge, MA **September 2024 - February 2025**

Undergraduate Researcher

- Assisted the development of a hand exoskeleton to gather manipulation data to train robotic actuators
- Used OnShape to modify fingertips and embed an endoscopic camera for tactile feedback while grasping objects
- Assembled design iterations with improved ergonomics and range of motion

MIT Biomechatronics Lab, Cambridge, MA **January - September 2024**

Undergraduate Researcher

- Prototyped a haptic device that provides pressure feedback to lower limb prostheses to aid in rehabilitation
- Designed and 3D printed molds using OnShape and fabricated silicone soft robotics actuators
- Assembled and troubleshooted electronics (op-amps, FSR); developed data collection scripts in Python and C++

Leadership

MIT RoboTeam, *President* **September 2024 - Present**

- Leading 15+ students in the development of a lunar rover to compete in the NASA Lunabotics competition
- Performed motor sizing calculations and component selection based on torque, mass, and environmental constraints

WORMS (Walking Oligomeric Robotic Mobility System), *Hardware Member* **September 2024 - Present**

- Designed and simulated a 5-DOF robot leg using Drake and OnShape; performed FEA to guide structural design
- Developed torque and battery models to validate actuator and power system specifications

Gordon-MIT Engineering Leadership Program, *Gordon Engineering Leade*r **September 2025 - Present**

- Participating in selective leader development program to build leadership, teamwork, and communication skills

Projects

Quadruped Robot

- Designed and prototyped a quadruped robot with 3 DOF per leg using OnShape, implemented inverse kinematics in C++
- Designed and soldered a custom PCB using Altium, intend to integrate PID control for stabilization

Myoelectric Bionic Arm:

- 3D printed and assembled a bionic arm controlled by EMG muscle sensor to perform a range of motions
- Designed and soldered a custom PCB using KiCAD and programmed movements using C++