

320 Memorial Drive
Cambridge, MA 02139

Sameen Ahmad

972-901-0135
sameen_a@mit.edu

10 Lochleven
Richardson, TX 75082

Education

Massachusetts Institute of Technology, Cambridge, MA

Expected Graduation: May 2027

- Candidate for B.S in Electrical Engineering & CS with a minor in Mechanical Engineering
- Coursework: Introduction to CS Programming in Python, Mechanics and Materials, Robotics Science and Systems, Mobile Autonomous Systems Lab, Discrete Math, Introduction to Design Thinking and Innovation

Brighter Horizons Academy, Dallas, TX

May 2023

- Valedictorian (1/65), GPA: 4.31, SAT: 1570
- Related Coursework: AP Calculus AB, AP Calculus BC, AP Biology, AP Chemistry

Professional Experience

Software Engineer Intern, Irving, TX

June - August 2024

Sensori Robotics

- Trained image segmentation model on grass, robots, and trees using YOLO and Segment Anything Model
- Developed tools to automate image annotations on custom dataset and performed R&D for generic obstacle detection using MiDaS, Florence-2 and Grounding DINO

Undergraduate Researcher, Cambridge, MA

January 2024

MIT Biomechatronics Lab

- Developing a pneumatic device that provides cutaneous pressure feedback to amputees with lower limb prostheses
- Assembled electronic interface, tested modules, and developed script for data collection and filtering

NASA Internship, Dallas, TX

May - August 2022

SEES High School Intern Program

- Collaborated with team to train four ML models to classify the genera of mosquito larvae, presenting research at the 2022 American Geophysical Union Meeting and the SEES 2022 Science Symposium
- Utilized GLOBE Observer Data and ArcGIS to analyze land cover change and the spread of mosquito-borne diseases, co-authoring two research papers in peer review

Extracurriculars

MIT Motorsports, Aero Mounting Member

September 2023 - May 2024

- Designed rear wing mounting tabs and goose neck through hand calculations Siemens NX

Moon Mechanics Robotics Team, Founder and Team Lead

October 2020 - May 2023

- Constructed an autonomous and remote-controlled robot to compete in the First Tech Challenge, progressing to the Regional Championships
- Trained computer model in performing object detection and classification
- Solicited \$5000+ through fundraisers and acquired sponsors, organized community outreach events

Polygence, Student Innovator

June 2022 - February 2023

- Prototyped a wearable device to monitor the onset of Covid-19 by recording heart rate, blood oxygen saturation, and core body temperature
- Consolidated findings in a research paper and presented project at the 12th Symposium of Rising Scholars

Projects

Quadcopter: Betaflight, 3D Printing, Soldering

Bionic Arm: 3D Printing, C++, Soldering, KiCAD (PCB Design)

Autonomous Racecar: ROS2, Python, C, OpenCV, Docker, Monte Carlo Localization, Path Planning, ML

Personal Website: HTML, JavaScript, Java, CSS, Flask

Wordle Clone & AI: Python, HTML, JavaScript, CSS, Flask

Electric Skateboard: Soldering, Vertical Mill, Bandsaw, Circuitry

Autonomous MASLAB Robot : ROS2, Python, C, Laser Cutting, Soldering, Onshape, OpenCV

Skills

Computer: Python, C++, Java, Flask, SQL, ROS2, OpenCV, HTML, Onshape, Arduino, ML

Project Management: Project Libre, Trello, Excel, PowerPoint

Machine Shop: TIG Welding, 3D Printing, Drill Press, Bandsaw