Mohadeb Halder
917-736-1105 | mohadebh@bu.edu | NYC, NY

Boston University — Boston, USA
Bachelor of Science, Mechanical Engineering — May 2027
Relevant Courses : Intro to Programming, Programming for Engineer, Intro to Engineering (EK 131 & EK 210), ME CADD, & Electric Circuits.

SKILLS

- Microsoft Office •Matlab •Arduino •Python •SolidWorks
- Communication •Teamwork •Leadership •Problem Solving •Organization

EXPERIENCE

President, Makerspace Club, Boston University **Jan 2024-Pres**

- Spearheaded a workshop series on SolidWorks and TinkerCAD for 50+ members, guiding design and 3D-printing of practical projects like phone holders and mini-gear assemblies.
- Established an Agile workflow using Trello to track 15+ concurrent projects, achieving 100% on-time completion and adherence to specifications.
- Directed the design and construction of a 5-DOF modular robotic arm, integrating servo motors and Arduino control to demonstrate precise object manipulation at the school's STEM fair (200+ attendees).

ME-357 CAD Coursework, Boston University **Sep 2024-Dec 2024**

- Engineered a parametric gearbox assembly in SolidWorks, adhering to ANSI standards for dimensions and tolerance.
- Conducted motion analysis to evaluate gear mesh, uncovering and resolving design inefficiencies that boosted transmission efficiency by 15%.
- Delivered a comprehensive package—including detailed engineering drawings and dynamic simulations—earning top marks for precision and innovation.

PROJECTS

Room Temperature Monitor, Boston University

- Developed an Arduino-based temperature monitor (70–75 °F range) with LED/buzzer alerts and real-time LCD readout.
- Modeled and 3D-printed an ABS enclosure with acrylic lid in Onshape for enhanced durability and easy assembly.

Truss Bridge Design, Boston University

- Collaborated with a 5-member team to increase load capacity by 54% (31.4 oz → 48.5 oz) through MATLAB simulations, iterative geometry optimization, and elimination of zero-force members.
- Achieved 39% cost savings (184 vs.300 budget) by prioritizing critical member reinforcement and balancing material efficiency.

Vibrating Pillowcase Alarm, Boston University

- Led a 4-person team to design an Arduino-based vibrating pillowcase alarm for the deaf/hard-of-hearing, achieving 100% wake-up success (10-user trials) and ±2-second precision via RTC integration.
- Reduced costs by 65% (69 vs.200 target) with optimized components and 3D-printed housing; prioritized usability via detachable, washable electronics (90% comfort).
- 1st Place Award in engineering competition for innovative assistive technology design.