

BIKRANT SHRESTHA

Mechanical Engineering & Minor in Physics

At Wentworth Institute of Technology



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<https://shrestha-bikrant.journoportfolio.com/>



(781)-813-0662

Curiosity-driven Mechanical engineering and Physics Senior from Nepal seeking hands-on experience in the industry. Open to any opportunity that allows enrichment and diversification of my technical knowledge from school and past experiences.

SKILLS

CAD

- Certified in **SolidWorks Mechanical Design** and **Simulation** by **Dassault Sytemes** and used on various projects involving **FEA** Analysis, **DFMEA**, **Sheet metal** design
- Used **G code** for modifying essential machine parts in **CNC machine** to fit in multiple project applications

MECHANICAL

- Used tools like **bandsaw**, **lathe**, **drill press** for adjusting the machine parts for the specific project requirements
- Built an intricate circuit system using **bread boards**, jumper wires and programmed **microcontroller** for high precision chocolate pump's control system

ELECTRICAL & SOFTWARE

- **Labview with DAQ**, **R-code**, **MATLAB**, **Soldering**, Wiring, familiar with Java and C++

EDUCATION

Wentworth Institute of Technology

BS in Mechanical Engineering

Minor in Physics

- GPA: 3.83/4.00
- Dean's List Honors

Bunker Hill Community College

Associates in Engineering

- GPA: 3.6/4.00
- Phi Theta Kappa Honors

EXPERIENCE

Integrated at Work |

Jan - Apr 2022

Assistant Project Manager | Boston, MA

- Assisting with submittals, closeouts, field lens support coordinating with project manager and general contractors
- Soliciting quotes for contractors and suppliers, subcontractor/installation quotes; on-site meetings to define scope

Setra Systems |

Sept - Dec 2021

Operation & Mechanical Engineer | Foxborough, MA

- Updating BOMs and drawings of electrical components required to build premium sensing equipment and transducers
- Analyzing material availability, end of life and other supply chain-based parameters to upload them on Silicon Expert for companywide usability and communicate the information with the vendors and suppliers

Hilliard's Chocolate Factory |

Jan - Aug 2021

Senior Capstone Design Project | West Bridgewater, MA

- Redesigning and building a prototype for a chocolate metering pump called Peppy Pump Jr. that involved circuit design and coding of Teensy microcontroller, I2C Serial LCD display, Stepper motor and Lead Screw setup
- The scope focused on high precision temperature and viscosity control design for chocolate tempering

PROJECT & RESEARCH

Research | Black Hole Phenomenology **Project | Heat Transfer Optimization**

Studied Hawking's Radiation including Minkowski Spacetime Diagram, Schwarzschild Radius and derived energy loss equations in terms of sophisticated heat transfer equations around the event horizon of a blackhole.

Analyzed the complete heat transfer conditions of a hot air balloon relating to the temperature, density, and mass flow between the fluids internal and external variables of the system.

LEADERSHIP

ASHRAE Wentworth | President | Sept 2019- April 2022

- Organized club meetings in labs for hands-on experience on heat transfer and optimized thermal design focusing in systems like heat exchanger