Hanna Mitamura

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SKILLS

MATLAB, C, HTML/CSS, OpenFOAM, COMSOL, SolidWorks, CAD/GD&T
FTIR, GCMS, UV-Vis, NMR spectroscopy, HPLC, ICP-MS
English-Native, Mandarin Chinese-Conversational
Microsoft Office and Adobe suite

EDUCATION

MS Mechanical Engineering: Thermofluid Science and Energy — **GPA 3.98/4.00**
Boston University College of Engineering, Boston, MA — May 2022
Late Entry Accelerated Program (LEAP) Graduate Scholarship

BA Chemistry with Honors, Anthropology Minor — **GPA 3.71/4.00**
Vassar College, Poughkeepsie, NY — May 2018
Sigma Xi Research Honor Society

PROJECTS

CFD Simulation of Micronozzle Flow — Spring 2022
Conducted OpenFOAM and COMSOL simulation of micronozzle flow for use in vapor-based micro-propulsion systems

Continuous Feed Pipe Cutter Design — Fall 2021
Designed a pipe-cutting machine, incorporated client feedback into functional requirements, modeled custom parts using SolidWorks, conducted Net Present Value/payback period assessment

Invention Notebook — Fall 2021
Translated client needs into specific product concepts, researched prior art, and drafted mock patents

Arduino-based Pulse Oximeter — Fall 2020
Built Arduino-based pulse oximeter with MATLAB signal processing

MATLAB Truss Modeling — Fall 2020
Coded a MATLAB program to calculate tensions experienced by members in truss model, used to match calculations to observed physical model

Intercollegiate Rocket Engineering Competition 2020 — Fall 2020
BU Rocket Propulsion Group, Airframe team lead, material selection, structural analysis, SolidWorks modeling/drawing (ASME Y14.5), and cost assessment

EXPERIENCE

Graduate Student Teacher Mechanics I, Boston University — Summer 2021
Supervised 14 undergraduate students in mini-truss design project

Research Assistant, Vassar College Department of Chemistry — Spring 2017 – Spring 2018
Conducted research on polyanhydride synthesis, presented at the American Chemical Society Undergraduate Research Symposium, April 2018