

**Theresa Nguyen**

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## EDUCATION

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**Tufts University**

**Medford, MA**

*GPA: 3.78, Bachelor of Science in Mechanical Engineering*

Expected May 2024

Relevant Coursework: Materials, Thermal Fluids, Engineering Design, Electronics & Controls, Biomechanics, Senior Capstone

**University of Hong Kong**

**Hong Kong**

Relevant Coursework: Dynamics and Controls, CAM/CAD

January 2023 – May 2023

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## TECHNICAL SKILLS

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**Programming Languages:** MATLAB, Python, HTML

**Software Programs:** SolidWorks (CAD/FEA), OnShape, KiCAD, COMSOL Multiphysics, NI LabView, Microsoft Office Suite

**Fabrication:** 3D printing (FDM, SLA), Lasercutting, Soldering, Woodworking, Metalworking (Mill, Lathe, Bandsaw)

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## RESEARCH EXPERIENCE

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**Tufts NanoLab**

**Medford, MA**

*Undergraduate Researcher:* Sampling Microbiome from the Gut Using a 3D Printed Pill

June 2023 - Present

- Design and fabricate a pill that samples microbiome from the gut using an electromechanical system while preventing cross contamination with other bodily fluids
- Conduct comprehensive literature reviews to analyze and synthesize findings from relevant academic papers, enhancing the foundation of current research methodologies and conceptual frameworks

*Undergraduate Researcher:* 3D Printed Microneedles with Microfluidic Paper-Based Analytical Device

June 2023 - Present

- Design and fabricate microneedles (~1.5mm) using SolidWorks and SLA 3D printing to create a painless and noninvasive method of sampling interstitial fluid
- Test prototypes and document results by recording detailed notes and photos

**Tufts Center for Engineering Education and Outreach**

**Medford, MA**

*Assistant Researcher*

June 2022 – May 2023

- Investigated how human research subjects foster learning in STEM in a “community of practice” by recording field notes, conducting interviews and focus groups, and analyzing audio/video media
- Organized large masses of data including field notes, photos, video, and audio files

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## CAMPUS ENGAGEMENT

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**Mechanical Engineering Diversity, Equity, Inclusion, and Diversity Board**

**Medford, MA**

*President, Vice President, Member*

January 2022 - Present

- Partner with the Mechanical Engineering Department to address issues regarding diversity and equity during weekly Town Halls through discussion and discourse
- Oversee an executive board and supervise events for underrepresented students, ranging from bonding events to open discussions about microaggressions; hosted allyship events in partnership with faculty focusing on anti-racism work

**Vietnamese Students Club**

**Medford, MA**

*Senior Advisor, Treasurer, Member*

September 2021 – Present

- Host and organize small-scale events, such as internal bondings, to strengthen community and large-scale events that showcase Vietnamese culture and heritage
- Reviewed, conducted, and maintained records of financial transactions for a budget of \$9000

**Tufts University Department of Mechanical Engineering**

**Medford, MA**

*Learning Assistant: Electronics and Controls*

September 2023 – Present

- Facilitate weekly lab sessions to teach students electronics and circuitry using breadboards and rapid prototyping

**Mayer Campus Center**

**Medford, MA**

*Campus Center Manager*

September 2021 – Present

- Oversee daily operations and manage the space within a building that serves 1000+ students daily