# TERESA MAROTTA

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# SUMMARY OF QUALIFICATIONS

- Broad exposure to mechanical design including SolidWorks, Blender, Meshmixer, 3D Slicer, and prototyping (SLA 3D printing, FDM 3D printing, and machine shop)
- Strong understanding of software principles: object-oriented design, data structures, and algorithms (C#, C++)
- Extensive experience writing technical reports focused on engineering design, user research, and testing
- Excellent collaborative and communication skills developed through team-based projects and internships

### **PROJECTS**

#### 3D Printed Mechanical Puzzle,

Computer Aided Design Course Project

- Used SolidWorks to design a 3D brainteaser puzzle that combined locking mechanisms and hidden drawers to enhance the difficulty of the puzzle
- Scaled and modified the size and infill of components using Z-suite to meet given size constraints

#### Toy Design for Children with Autism,

Engineering Design Course Project

- Conducted user research to develop and test a toy that reduces the frequency of emotional outbursts
- Improved the effectiveness of the design by 20% through iteratively integrating sensory-based features

# Mobile App for Promoting Social Action,

**Technovation** 

- Conducted extensive market research and identified global trends in social justice to produce an 18-page report outlining a long and short-term business strategy
- Performed intensive competitor research to determine key components of the app to shape software design

### EXTRACURRICULAR

- UW Muay Thay Club
- Biotech Conference 2018 Delegate
- Hack the North 2018 Participant, SheHacks 2020 Participant
- DELF (Diplôme d'études en langue française) B1 Certificate - French Language Proficiency Certificate

### EXPERIENCE

## BIOMEDICAL ENGINEERING ASSOCIATE | Niagara Health System

Jan 2020 - Present

- Designed an ultrasound biopsy phantom of a kidney for medical training purposes using 3D Slicer, Blender, Meshmixer, and SLA 3D printing
- Used SolidWorks to design and 3D printing to produce non-critical pieces for medical devices, assistive devices for occupation therapy, and teaching models for speech pathology
- Created a PowerPoint, poster, and other promotional materials for various events promoting the 3D printing program including a presentation at the Clinical Engineering Society of Ontario Conference

## SPECIAL PROJECT MANAGER | Eon V Labs

May 2019 – Aug 2019

- Performed extensive market research and generated project proposals, business plans, marketing decks, and blog posts to determine and pursue the optimal direction of the company
- Managed company communications with external contacts and other relevant organizations
- Acted as the primary author for a 43-page project proposal that advanced to the second round of a business plan competition

#### **DESIGN TEAMS**

**PRESSURE SENSOR DEVELOPER |** BioMechatronics University of Waterloo Sept 2019 – Dec 2019

 Designed PCB schematic for a Bluetooth enabled pressure sensor using DipTrace and soldered components to the developed PCB

# **MEDICAL DEVICE DESIGNER |** Medical Makers University of Waterloo Sept 2018 – Apr 2019

- Designed medical devices and their mechanical components for use by physicians in developing nations
- Developed mechanical designs in SolidWorks, 3D-printed multiple prototypes, and performed extensive functionality and product testing

#### **EDUCATION**

Candidate for BASc in Biomedical Engineering – Expected Apr 2023 UNIVERSITY OF WATERLOO - Waterloo, Canada

Relevant Courses: Data Structures and Algorithms (C#, C++), Computer-Aided Design (SolidWorks)