ARUSHRI SWARUP
58 Northforest Trail,
Kitchener, Ontario, Canada N2N 2Z1
519-575-5468 | arushriswarup@gmail.com

PERSONAL STATEMENT

A driven, hard-working and optimistic biomedical engineer in her final year at the University of Toronto. Has developed prototyping, engineering design, teamwork and project management skills through her internship and engineering course work. Eager to apply and develop her skills in exciting, new biomedical engineering challenges.

WORK EXPERIENCE

Engineering Associate – Baylis Medical Company May, 2014 – August, 2015

- Designed, tested, documented and implemented verification and validation testing of medical devices
- Managed RoHS compliance project – communicated with suppliers and quality department, took meeting minutes, managed documentation and project plan on MS Project
- Used Solidworks to update device drawings, assemblies, and prototype designs
- Prototyped and tested production jigs using feedback from senior engineers and production operators
- Addressed non-conformances in production by performing technical investigations, developing and implementing a solution in production
- Developed a Laser Welding Training Document, Manufacturing Protocols, Component Descriptions, Test Protocols, Engineering Change Orders

EDUCATION

University of Toronto September, 2011 – April, 2016

Bachelor of Applied Science and Engineering, **Biomedical Systems Engineering**
3rd and 4th Year GPA 3.7
Relevant Courses: Biomedical Engineering Design, Undergraduate Thesis, Biomaterial and Medical Device Development, Human Physiology, Cells and Tissue Engineering

ENGINEERING PROJECTS

Design and Fabrication of an Endoscopic Ear Surgery Tool September – December, 2015

- Collaboratively designed a modified surgical tool for Endoscopic Ear Surgery with four team members and an ENT Surgeon at SickKids Hospital
- Used Solidworks, 3D printing and Mill machining to design a functional prototype and tested inside a 3D printed ear canal and a cadaver ear canal
- Delivered a final presentation and report

Undergraduate Thesis: Computer Simulation of Nerve Stimulation September, 2015 – April, 2016

- Developed a model of enhanced transcutaneous electrical nerve stimulation on a simplified human leg using COMSOL Multiphysics
- Analyzed nerve excitability using Matlab and optimized model parameters
- Delivered thesis presentation to peers and supervisor
- Thesis report submitted to the Division of Engineering Science in April, 2016

Fabrication of Pneumatic Engine - Basic Machining Course at George Brown College February, 2015

- Used Lathe, Mill machine and Drill press to machine a pneumatic engine from engineering drawings

Design and Experimental Verification of a Damped Crutch January – April, 2014

- Collaboratively designed and prototyped a dampened crutch with a team and measured force imparted by the crutch using a force plate and Matlab
- Submitted a proposal and delivered an oral presentation

Development of an Antimicrobial Resistant Microorganism Monitoring System May – August, 2013

- Conducted diffraction-based immunoassays and tested them on a system of optical instruments along with a fellow student
- Utilized Matlab to analyze data collected, wrote an SOP for diffraction-patterning slides

Engineering Design Proof of Concept Dowel-Packing Machine
University of Toronto Division of Engineering Science January – April, 2012

- Designed and prototyped a robotic dowel-packing machine in a machine shop with two team-members

Aeroponic Proof of Concept Project May 2012 – November, 2014

- Collaboratively built an Aeroponic Garden System consisting of individual garden units with a spraying system and drainage system, with a team

SKILLS

- Matlab, Solidworks, Microsoft Office, COMSOL Multiphysics, ImageJ
- Laser Welder, Force Gauge, Pull Test Stand, 3D Printer and Basic Machining Skills
- Molecular biology wet lab training and experience through coursework
- Certified in Laser Safety Training by U of T, May, 2013

AWARDS

- NSERC IUSRA Award May-August, 2014 and May-August, 2015 during PEY at Baylis Medical Company
- Recipient of 2011 University of Toronto President's Scholarship

CLINICAL VOLUNTEER EXPERIENCE
Grand River Hospital/Regional Cancer Centre Volunteer: Summer Student Program July – August, 2011

- Interacted with patients undergoing chemotherapy

LEADERSHIP/VOLUNTEER EXPERIENCE
Engineering Science Ambassador September – December, 2013

- Conversed with prospective engineering students at the Ontario University Fair and Fall Campus Day, representing Engineering Science at the University of Toronto

HOBBIES
Bollywood Dance Instructor at Hart House, U of T February, 2016 - Present

REFERENCES: Available on Request