JEROMY DENK

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EDUCATION

University of Ottawa   2015 - 2023

B.ASc. Mechanical Engineering   *Ottawa, ON*

WORK EXPERIENCE

Immigration, Refugees and Citizenship Canada   September 2018 – August 2019

ATIP Officer   *Ottawa, ON*

- Tasked with indexing access to information and privacy requests

- Supported the automation of existing workflows through the creation and maintenance of Excel VBA-based applications

- Improved inter-departmental communication through the development of a standardized machine-readable information request form

- Created an Excel VBA-based web-scraping application used by data analysts to batch-download and correctly format files from internal database

SKILLS

Software: Solidworks, AutoCAD, ANSYS, Adobe Suite, Office Suite

Programming: Python, MATLAB, VBA, Google Scripts, C, LaTeX

ACADEMIC PROJECTS

Submarine Ballast System   December 2020

- Developed a submarine ballast system capable of maneuvering a two-person submarine at depths of 1000 metres as part of a four-person team

- Using a MATLAB GUI, parametrized Solidworks part files allowing for changes in the ballast system design to be automated depending on customer request

- Using ANSYS, optimized design of submarine main ballast tanks and main ballast tank mounting structure to withstand collisions with terrain

Self-Leveling Glider   November 2017

- Involved in a three-person team tasked with designing a glider that levels its wings when thrown by hand

- Programmed a microcontroller to adjust the glider's control surfaces based on input provided by an inertial measuring unit

- Designed and manufactured a circuit board integrating the microcontroller, servo motors, and inertial measuring unit

uOttawa Rocketry Team   February 2017 – November 2017

- Tasked with designing and manufacturing a servo-controlled oxidizer valve for a hybrid sounding rocket

- Heavily involved in the design and manufacturing of rocket oxidizer tank and combustion chamber

- Designed rocket's fins using Solidworks and Microsoft Excel scripting to ensure optimal aerodynamic stability

Two-Axis Step-Motor Driven Drawing Robot   March 2017

- Built an inexpensive, open-source drawing using 3D printed parts, a microcontroller, and step-motors

- Created a script that converts downloaded images into drawing paths for the robot based on image brightness