CONNOR SWEET

2A MECHATRONICS ENGINEERING STUDENT

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» SKILLS

LANGUAGES	TOOLS
C++	Git
C	Bash
C#	Node.js
Processing	MS Bot Framework
VB.NET	Solidworks
Javascript	AutoCAD
SQL	ROS
Java	MS SQL Server
Assembly	Agile Scrum
	JIRA
	Linux
	MATLAB
	Vim
	Arduino
	GD&T
	PLC

» EDUCATION

UNIVERSITY OF WATERLOO
Candidate for Bachelor of Applied Sciences: Mechatronics Engineering
- Received certification to operate the band saw, drill press, milling machine and lathe
- Elected Mechatronics Class Representative for the 1A term
- Member of the Waterloo BioMechatronics Team

» EMPLOYMENT

THE CO-OPERATORS
Robot Process Automation Developer — Apr. 2018 to Aug. 2018
- Created chat-bot using MS Bot Framework in Node that receives XML input to prompt questions and validate user response type
- Coded and deployed web-service for the chat-bot to store user responses in MS SQL
- Developed an API for the web-service to interact with MS SQL
- Wrote VB.NET script to pull information from server and populate internal systems on Guidewire and Oracle frameworks.

» PROJECTS

Line Following Music Player - Zero Robotics Competition
- Constructed an Arduino-controlled cart which plays music corresponding to the colour shade read by a colour sensor
- Fabricated circuit layout on aluminum chassis to properly distribute weight
- Designed and implemented circuit consisting of R2R bridge and motor controls
- Competed as part of a four person team in the UW Zero Robotics Competition

RobotCMajor - Guitar Playing Robot
- Designed, created and tested a robot able to plot and strum power chords on acoustic guitar
- Took a leading role in programming the robot using multiple threads to optimize play time and improve sound quality
- Designed chassis for robot including a strumming arm and a gantry system allowing 3 dimensional movement
- Wrote driver tasks for each function to test functionality and efficiency of the code

First Robotics Competition Entry - UW Robot in 3 Days
- Worked alongside a team of 20 in developing a working mechatronic system over the course of 72 hours to take part in the annual First Robotics Challenge
- Programmed subsystem functionality for object intake mechanism and climbing mechanism
- Mapped robot functionality to available buttons and axes on remote controller
- Machined aluminum claw components for grappling

Mars Rover - University Rover Competition Entry
- Working as part of the University of Waterloo Robotics Team to develop an autonomous rover to compete in the competition
- Using ROS to develop autonomous path-finding scripts to locate objects within a 5-10ft vicinity from a provided GPS coordinate

Eagle Eye - EngHack 2018
- Created portable Arduino-powered audio-movement sensor
- Wrote Processing script to receive serial data from microcontroller and post data to website
- Ranked one of the top 15 hacks in EngHack 2018
- Winner of the Wolfram Challenge