CONNOR SWEET

1B MECHATRONICS ENGINEERING STUDENT

cssweet@edu.uwaterloo.ca
connorsweet.ca
226-868-3045
/connorsweet
/connorssweet

» SKILLS

LANGUAGES	TOOLS
Java	Git
C++	SolidWorks
C	AutoCAD
C#	ROS
HTML	GD&T
CSS	MATLAB
Bootstrap	
Arduino	
Processing	

» 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 Robotics Team

» AWARDS

Loran Scholarship Nominee for Bluevale Collegiate

Schulich Leader Scholarship Nominee for Bluevale Collegiate

Lakeshore Village Optimists Club Commencement Scholarship

John Boulden Award for Outstanding Premier at 51st KW Fed-Prov Conference

Outstanding Delegate Award at 50th KW Fed-Prov Conference

» PROJECTS

HACK THE NORTH - CHARITY NAVIGATION
- Worked in a team of 4 to develop charity recommendation site to assist in disaster relief, currently reviewing and updating service for official release
- Applied Firebase and Twitter API to implement back-end data system of charitable foundations and trending topics

LINE FOLLOWING MUSIC PLAYER - ZERO ROBOTICS
- Constructed an Arduino-controlled cart which plays music corresponding to the color shade read with a color 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

GAME OF RISK
- Designed working game based off of Hasbro's Risk board game
- Controlled game mechanics using state machine and multithreading to handle various events
- Created optional computer players to position troop and attack incentivising territory gain
- Created a log to display actions players have taken from the beginning to the end of the game

FIRST ROBOTICS COMPETITION ENTRY - UW ROBOT IN 3 DAYS
- Worked alongside a team of 20 in developing a working mechatronic system to take part in the annual First Robotics Challenge over the course of 72 hours
- 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 10 metre range of a GPS coordinate with assistance from Computer vision

MEDIA PLAYER
- Developed media application supporting the use of .mp3 and .wav files as part of a group of three
- Programmed using multiple threads to allow seamless audio playback while the GUI is in use
- Implemented functions to select, shuffle, and go to previous or next songs, and display time song has been played

» VOLUNTEERING

BARDISH CHAGGER'S WATERLOO RIDING YOUTH COUNCIL - DIRECTOR
- Leading Ongoing Waterloo Transportation Sustainability Project to advocate for free busing for high school students
- Directed media operations and networked with partners within the region

STUDENT COUNCIL - CO-PRESIDENT, CHAIR OF MEDIA PRODUCTION, SOCIAL COORDINATOR
- Acted as a Student Liaison within Bluevale Collegiate's Parent Council
- Attended Canadian Student Leadership Conferences on Behalf of Bluevale Collegiate
- Developed multimedia presentations and graphics for school dances and events
- Led a team of 30 students in organizing a multitude of school events and activities