

M. AVERY B. SOULE

SKILLSET

Design

4+ years strengthening skills in mechanical design · electrical design · product design · GD&T · CAD · UI/UX

Prototyping

4+ years experience with metalworking · woodworking · fabrication · modeling · wiring
1+ year advancing machining skillset · Mill · Lathe · Bandsaw · Brake · Taps & Dies

Development Tools

Proficient with Inventor · Fusion · Solidworks · Photoshop · Illustrator · InDesign · Final Cut Pro
1+ year developing skills in C++ · Python · Arduino · VBA · AHK · HTML · CSS · JavaScript · Git · GitHub

EXPERIENCE

Motolab · Founder

Jan 2017 - Current  [uwmotolab](#)

Leading Waterloo's electric motorcycle racing team through the design, budgeting, manufacturing & testing of our track-oriented bike

Linamar · New Product Development Co-op

Sept - Dec 2017

Led a **UX/UI design** improvement project for company-created software packages
Developed & implemented an **AHK & VBA** script library for automating company processes

Dynaplas · Advanced Engineering Co-op

Jan - Apr 2017


Independently developed & managed a 3D printing lab
Designed & produced numerous components used across the business · **CAD** · SLA · FDM
Contracted external shops to machine components from my designs · **Eng. drawings**

Additional Positions

SYDE Class Sports Rep · Shad Fellow · Outdoor Ice Rink Volunteer · Tutor · Hockey Captain

PROJECTS


Electric Vehicle Conversion

Self-initiated project converting an internal combustion powered car into a **road legal electric vehicle**  [celicaconversion](#)

Attained extensive **research, problem solving & design experience** through the project planning and design stages

Designed, fabricated, and assembled numerous components to finish retrofitting each vehicle system

BlackBox

Developed an **Arduino-based product** that logs vehicles motion, infotainment inputs & control interactions for accurate maintenance indicators & post crash analysis  [BlackBox](#)

Rhythm Lighting

Used **personas, market research & iterative prototyping** to create an **Arduino-based product** aimed to optimize seniors' circadian rhythms by providing ideal lux & colour temp at all hours in a day

Cynetik Sports

Co-designed a mechanical anti-lock braking system for bicycles from **problem space definition** to a **working prototype**

Additional Projects

Automated Finance Tracker · Speed Boat Redesign · Hybrid Parabolic Solar Cooker Design - **CYSF** Gold Medalist · Electric Go-kart Powertrain Design

INTERESTS

Calisthenics & Weight Training · Backcountry Skiing · XC Biking · Running · Hockey · Muay Thai · 7's Rugby · Motorcycling · Film Creation · Startups

EDUCATION

Honours Systems Design Engineering · 2A
University of Waterloo, Class of 2021

Design, Systems & Society · Data Structures & Algorithms - **Python** · Human Factors in Design · Digital Computation - **C++**