

Russ Case

rc@russcase.com • (206) 375-5145 • Seattle, WA (U.S. Citizen) • linkedin.com/in/rwcase • Portfolio: russcase.com

Summary

Driven worker and learner, with bachelor's degrees in both Mechanical Engineering and Visual Arts. Strong work history, with hands-on project experience in design, testing and manufacturing, as well as a background in communication, coordination and leadership. Particularly interested in design, manufacturing, motion control, and industrial controls / automation.

Education

- B.Eng., Mechanical Engineering** 2019
British Columbia Institute of Technology
- Wendy B. McDonald Memorial Award
 - GPA: 3.4/4.0
- Diploma, Mechanical Engineering Technology (With Distinction)** 2017
British Columbia Institute of Technology
- B.A., Visual Arts** 2015
University of British Columbia

Work Experience

- Engineering Co-Op, Testing Team** Summer, 2018
Zaber Technologies, Vancouver
- Designed, built, and modified test fixtures and equipment, including:
 - Vibration/Drop-test fixtures
 - Laser interferometer retroreflector mounts
 - Vacuum chamber feed-through ports
 - Rotary and linear accuracy test setups
 - Performed and documented a variety of product and component tests:
 - Developed publishable accuracy specifications for a linear actuator product line
 - Tested device accuracy with linear encoders and laser interferometers
 - Tested speed/torque curves, compiled report on stepper motor performance for production
 - Disassembled and inspected RMA'd device to determine source of defect during production
 - Updated, modified and wrote Python test scripts to interface with motion control devices, linear encoders, load cells, and thermocouples
- Marketing Assistant** 2015 – 2017
Western Canadian Properties Group, North Vancouver
- Scripted, recorded, edited, and animated a series of marketing videos
 - Researched market statistics and population data, compiled reports for distribution
- Production Coordinator** 2008 – 2015
DHX Media/Studio B Productions, Vancouver
- Oversaw teams of up to 15 artists during the production of several animated television shows
 - Responsible for allocating work, as well as organizing and maintaining a revision system
 - Ensured schedule adherence, responsible for minimizing the impact of production delays

Major Engineering and Mechanical Projects

Baja SAE

- 2 years as Team Captain
- 1 year as Chief Engineer, focused on creating strain testing and telemetry system
- Led the team during the design and manufacture of a 2nd-Generation vehicle
- Participated in 4 Baja SAE endurance race events

Senior Capstone Project (2019): wireless torque/power-sensing datalogger

- Self-contained axle module, installs as a single drop-in part with no modification required
- MEMS gyroscope, accelerometer, and strain gauges used to output live power data via Bluetooth

Sophomore Capstone Project (2017): Baja SAE Tube Chassis

- Acted as lead designer and drafter
- DFMA: Reduced assembly time and minimized welded joints through use of 3D bending
- Designed a cost-effective jig system to streamline assembly and constrain critical geometry

3D Printer Projects

- Built a self-sourced cartesian RepRap printer in 2012-2013
- Designed and built a Delta-style printer for BCIT Open House 2016

Automotive

- Completed an automatic-to-manual transmission swap and head rebuild on classic car
- Converted a small van for camping use, including hardwood floor, folding bed and solar array

Software, CAD, and Coding Skills

- Proficient with C language: Schoolwork included simulation of finite-difference heat transfer and fluid flow, trajectories, and interfacing microcontrollers to sensors, keypads and displays
- Intermediate coding skills in other languages: Can interpret, write, and modify simple programs in C++, Python, MATLAB, and PLC logic. Website-building experience with HTML and CSS
- Familiar with SolidWorks Simulation and AutoCAD
- Familiar with MATLAB, Simulink and LabView through coursework
- Proficient with Solidworks and Autodesk Inventor
 - Modeled and built multiple projects for coursework, Baja SAE, and hobbies

Communication and Leadership

- Led a Baja SAE racing team with 30+ members, participated in 4 SAE races.
- Managed teams of up to 15 workers in an office environment
- Comfortable with group and individual communication, both written and in-person
- Skilled technical writer; experienced in creating training documents and reports

Machining and Shop Skills

- Manual: Proficient with lathes, mills, and basic shop equipment (grinders, saws, hand tools)
- CNC: Proficient with 3-Axis CNC mills, HSMWorks CAM, waterjets, and laser/plasma cutters
- Shop drawing experience, including weld symbols, 3D bend diagrams, and GD&T standards
- Familiar with MIG and Oxy-Acetylene welding