Scott D. Odland

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Education

NORTHWESTERN UNIVERSITY   Evanston, IL
Bachelor of Science in Mechanical Engineering, Concentration in Robotics, GPA: 3.47/4.00   June 2021
Relevant Coursework: Electronics Design; Computer Aided Design; Fluid Dynamics; Thermodynamics, Mechatronics, Embedded Programming, Swarm and Multi-Robot Systems, Robotic Manipulation, Probabilistic Systems, Fundamentals of Computer Programming

UNIVERSITY OF EDINBURGH   Edinburgh, Scotland
Relevant Coursework: Sustainable Energy Technologies; Sustainable Energy Principles and Processes   Fall 2019

Leadership and Activities

Northwestern University Robotics Club (NURC) Workshop   Fall 2020
Workshop Co-Chair
- Designed an introductory course in robotics for new members of NURC
- Developed a curriculum to teach these students embedded programming, circuitry, PWM, CAD and motor control

RoboBrawl   Winter 2020
Manufacturing Lead
- Managed manufacturing for four five person teams to ensure battle-readiness by competition date.
- Programmed microcontroller in Arduino C++ to link a PS4 controller to the differential and weapon drive of battlebot.
- Mapped and soldered electrical layout for battlebot.

Design Competition, Northwestern University   Spring 2018
Team Member
- Designed and built a semi-autonomous robot to detect/collect objects under a shroud.
- Devised, executed diagnostic tests for electrical components.

Work Experience

Interactive and Emergent Autonomy Lab   Evanston, IL
Research Assistant   Fall 2020 - Current
- Led design and development of 30+ robots for Bayesian particle filter experiment
- Optimize IR detection to develop a more robust target detection algorithm

Sibel Health   Niles, IL
Hardware Engineering Intern   Summer 2020

- Performed and documented mechanical life cycle testing on chest and limb sensors for FDA approval
- Validated new temperature sensor in comparison with old one using a Bland-Altmann plot
- Designed new custom battery pack for lithium polymer battery packaging

Segal Design Institute   Evanston, IL
Level 1 Shop Trainer   Winter 2020 - Current

- Trained undergraduate engineers to use the mill, lathe, waterjet, and horizontal/vertical band saw.
- Received CPR, first aid and AED certification and ensured student adherence to safety protocols

Grain Surfboards   Amagansett, NY
Skateboard Workshop Instructor & Woodshop Crew Member   Summers 2018, 2019
- Led workshops for custom built skateboards, hand-planes and bodyboards.
- Built for-sale furniture pieces/household items: benches, cutting boards, picture frames and mirrors.
- Drafted instruction manual for at-home construction of custom-built skateboards.

Skills/Other/Interests

Language: Read, speak, write conversational Spanish.
Software: SolidWorks, Git, OnShape, C, C++, Python, Excel, FEA analysis, Solid Edge, MATLAB, NX, PID control and GD&T, CoppeliaSim, Docker, HTML, CSS, UNIX, Object Oriented Programming (OOP)
Machinery: Manual and Conversational Mill; Water Jet; Laser Cutter; 3D Printer; Lathe; Band, Chop, and Table Saw; Router; Joiner
Other Activities: Club Lacrosse, Practice Goalie for Northwestern Women's Lacrosse, ZBT Risk Manager and Standards Director
Interests: Skateboarding, Snowboarding, Surfing, Painting