

Scott D. Odland

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Education

NORTHWESTERN UNIVERSITY

Bachelor of Science in Mechanical Engineering, Concentration in Robotics, GPA: 3.48/4.00

Evanston, IL

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

Leadership and Activities

Northwestern University Robotics Club (NURC)

March 2020 – Current

Workshop 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
- Maintain and advise club activities as a member of the NURC Exec Board

RoboBrawl

Jan. – March 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.

Design Competition, Northwestern University

March – June 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

Signode Industrial Group

Glenview, IL

Electrical Engineering Intern – Robotics

Jan. 2021 – Current

- Automated pick and place assembly line packing, more than doubling the output
- Designed 3D printed fixtures for end effector of ABB robot arm
- Simulated assembly line process in ABB's RobotStudio

Interactive and Emergent Autonomy Lab

Evanston, IL

Research Assistant

Sep. 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

June – Sep. 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-Altman plot
- Designed new custom battery pack for lithium polymer battery packaging

Segal Design Institute

Evanston, IL

Shop Trainer

Jan. – June 2020

- 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

June – Aug. 2017, June – Aug 2018

- 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

Software: SolidWorks, Git, OnShape, C, C++, Python, Excel, FEA analysis, Solid Edge, MATLAB, NX, PID control, RobotStudio, 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