

Daniel Lacey

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EDUCATION

Clarkson University - 3.4 GPA Potsdam, NY Graduated May 2022

B.S. Mechanical Engineering, **minor** Computer Science

EXPERIENCE

Intern - International Electronic Machines Corporation (Troy, NY) Summer 2020

- Responsible for the development and design of vibrational energy harvester prototypes.
- Reviewed numerous journal articles and conducted performance tests on multiple competitor models.
- Developed a magnetic field simulation program using MATLAB.

Metal Organic Framework Nanostructures Undergraduate Research (Potsdam, NY) 2020 – 2022

- Primary focus was on reducing MOFs (Metallic Organic Frameworks) into nanostructures.
- Used LAMMPS (Large-scale Atomic Simulator) to simulate the structure and stress tests.
- Simulation results matched experimental data.

Intern - Vara Safety (Troy, NY) Summer 2019

- Learned how to design products for manufacturing, basic CNC operation, how to manage RFQs (request for quotation) from overseas vendors and execute POs.
- Designed multiple patented parts.
- Developed several concept designs for future products.

PROJECTS

Refrigeration: 3d Printed Pulse Tube Refrigerator

SAT# Solver:

- Computer Logic solver that finds all Possible answers
- Can be used to solve and optimize problem in Engineering, Computer Science, Logistics, and more

Artificial Learn:

Deep Reinforcement Learning

- Experience writing and modifying self-learning learning algorithms
 - ex: **Deep Q Learning, Double Deep Q Learning, Policy Networks, and Actor Critic 2 (a2c).**

Graphical Neural Networks

- Neural Networks Design to perform inference on data described by graphs
- More optimal frameworks for solving and optimizing real world design problems

Binary Classifier

- Studied and written multiple types of binary classifiers
- Built visual demo of random forest classifier
- Written **Neural Network** classifier

Robotics: Mobile Arduino Based Scanning Robot

3d printer: complete rebuild/with modifications

Project Portfolio: <http://dan.laceys.com/>

GitHub: <https://github.com/FernandoRando1>

TECHNICAL SKILLS

- Machine Shop Certifications: CNC, Lathe, Mill and Basic shop tools
- Welding
- 3D Printing (adv)
- Circuit board prototyping
- CAD (adv)
- C++, Java, Python, MATLAB, and more

LEADERSHIP

- Alpha Kappa Psi: Fundraising Chair
- Clarkson Rugby Club: Vice President