

Neal Dawson-Elli

4579 State Route 14, Dundee, NY 14837 (permanent)
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nealde.github.io nealde@uw.edu

Education:

Rochester Institute of Technology, Rochester, NY

2010-2015

BS in Chemical Engineering

G.P.A. 3.58 /4.0

Dean's List

Curriculum: Fluid Mechanics, Thermodynamics, Reaction Engineering, Mass Transfer Operations, Organic Chemistry, Differential Equations, and Masters-Level Material Science, Systems Dynamics and Control, Capstone Design Course.

University of Washington, Seattle, WA

2015-present

PhD in Chemical Engineering Expected, 2020

G.P.A. 3.59 /4.0

with Option in Advanced Data Science

Focus in computational modeling, software and hardware integration, specifically with lithium ion batteries. Recent work includes applying data science techniques, including machine learning, to physics-based models in order to aid in voltage prediction and parameter estimation.

Objective:

To apply the knowledge and skills that I have acquired throughout my college tenure to solve engineering problems in a thoughtful, complete, and organized manner.

Skills:

Competence in Julia, Python, SciKit-Learn, MATLAB, Maple, Excel (including VBA), Word, PowerPoint, Filemaker, Chemcad. Experience with MXnet.jl and Git.

Experience:

231st ECS Conference Presentation

2017

May 29 2017

Increased system efficiency by upgrading data management in Excel VBA, upgraded data analysis techniques using Excel VBA, managed and ran a chemical vapor deposition chamber creating Organic LED lights, and helped design experiments involving formulation of devices.

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OLEDWorks

2014

Jan-June 2015

Increased system efficiency by upgrading data management in Excel VBA, upgraded data analysis techniques using Excel VBA, managed and ran a chemical vapor deposition chamber creating Organic LED lights, and helped design experiments involving formulation of devices.

Empire Precision Plastics

2013

Mar-August

Replaced the database written in Filemaker, coded numerous Excel spreadsheets to act as searchable databases, worked with lead engineers to operate, maintain, and start up injection molding presses and ultrasonic welders.

Corning Incorporated Intern

2012

May-August

Worked with the Ultracapacitor Group, planning and running original experiments, designing and proving feasibility of new technology, scaling up existing reactions technology, designing dispersions to exhibit specific qualities while still being coatable. Highly independent original research which involved making and testing button cells for functionality. Also involved giving presentations at technical meetings and justifying new directions for research.

Corning Incorporated Intern

2011

May-August

Worked with the Ultracapacitor Group, planning and running original experiments, focusing on technology improvement, reducing wastes and scale up. Primary focus on improving current processes and eliminating hazardous waste production. Involved giving presentations in technical meetings and maintaining process integrity while introducing modifications.

Interests

My academic interests focus around using my understanding of physics and electrochemistry to aid in applying data science techniques to problems of interest.

My extracurricular activities include a passion for soccer, ultimate frisbee, volleyball, hiking, and weight lifting, as well as home automation projects, electric bicycles, and photography.