

DAVID S. HURT

PERSONAL DATA

DATE & POB: 29 July 1993 | Baltimore, Maryland
ADDRESS: 3920 Stone Way N (Apt 304) | Seattle, WA
PHONE: +1 (443) 834-5918

EMAIL: Contact@David-Hurt.com
WEBSITE: www.David-Hurt.com
GITHUB: [FencerDave](https://github.com/FencerDave)

WORK EXPERIENCE

- | | | |
|---|---|--------------------------------|
| NOV 2018-
PRESENT | BenAn Energy Technology
Consulting Engineer for Battery Performance | Shanghai, China
Seattle, WA |
| <p>Have joined BenAn Energy's pilot R&D team, focusing on the Battery Lifetime RCCA project. Operating pilot equipment for production of NASICON-like and LFP-format active materials. Overseeing data processing and communications between the Shanghai and Seattle teams, to characterize the impacts of battery lifetime on aging. Establishing additional material quality measures to accompany our pilot scale-up efforts.</p> <p>Continuing Data-Processing and experimental consulting tasks while at University of Washington, focusing on Next-Generation product development. Taking lead on test-based qualification of battery performance and cost modeling for new product.</p> | | |
| JUNE 2016-
SEP 2018 | Aquion Energy
Test Engineer for Research and Development | Pittsburgh, PA |
| <p>Organized and operated testing equipment (Maccor, MTI, Arbin) for R&D, and processed performance data for product scale battery tests. Prototyped and fit the battery performance and cost- model. Managed test and data resources on Aquion's restructuring team, until acquisition in Summer 2017. Post-Restructuring, led the Aquion Pilot Operations team to optimize anode active material performance and reliability. Organized communication between third-party engineers to plan the opening of operations overseas.</p> | | |
| MAY 2015-
MAY 2016 | Lockheed Martin: Advanced Energy Storage
Chemical Engineering Co-op and Contractor, Test Team | Cambridge, MA |
| <p>Operated test stacks for high energy flow battery operation, working to scale up novel membranes and electrolytes from the lab to a functional product. Analyzed data from long-scale durability testing using Python and Excel/VBA.</p> | | |
| JUL-DEC
2014 | DANA Victor Reinz
Technical Practicum: Primer Development | Ulm, Germany |
| <p>Worked as a developer for cylinder head gasket primer chemistry and application technique. Drafted experimental protocol for international research teams for better applying primers in the lab. Regularly presented to department and US/Japanese teams in both German and English..</p> | | |
| JUL-DEC
2013 | INFINIUM Metals
Chemical Engineering Co-op, Anode Team | Natick, MA |
| <p>Performed chemical compatibility testing and analysis on materials for novel electrowinning processes. Ran SEM, EDX, and XRD analysis to study salt-ceramic interface corrosion, metal-ceramic interface migration, and ceramic microstructure and calcination.</p> | | |

EDUCATION

SEP 2019- JUNE 2020	Master of Science Degree in CHEMICAL ENGINEERING University of Washington , Seattle, WA <u>Focus Track:</u> DIRECT Data Science <u>Projects:</u> Spray Dryer 3D Model, EIS Data Interpreter, SQL Database Setup in Python
MAY 2016	Bachelor of Science Degree in CHEMICAL ENGINEERING and PHYSICS Northeastern University , Boston MA <u>Extracurricular Coursework:</u> Environmental Science, German 1-3, Solar Thermal Engineering, Process Controls <u>Titles and Achievements:</u> President of AIChE student chapter, Captain of ChemE-Car team, Dean's scholarship

OPEN SOURCE PROJECTS

2018- PRESENT	Project BattChem: https://github.com/FencerDave/battchem Package and Webtool to assist in battery performance modelling which will agree with electrochemical fundamentals. Eventually want to publish as a free online webtool for non-programmers to use as well.
2020- PRESENT	Projects EISy + HARDy: https://github.com/EISy-as-Py Group capstone projects for UW Masters' degree. Initially focused on building a neural network to classify high-throughput EIS data based on data noise and identifying features. Second project has become broad, using randomized data transformations to classify arbitrary sorted data sets, and discover trends in data through randomized machine learning.
2019- PRESENT	Project Spray Py: <Repo Pending> Tool to assist in Spray Dryer design, testing, and operation. Began as a heat, chemical, and mass transport modelling challenge in graduate ChemE Math class. Currently planning to develop droplet model into a full-system spray dryer simulation.
2015- 2016	Project ReNUclear: www.David-Hurt.com/Project-ReNUclear.php Undergraduate ChemE Capstone at Northeastern University. Proposed a novel way to think about Nuclear decommissioning projects, using a Molten Salt Breeder Reactor to drastically reduce the activity of spent nuclear fuel.

TECHNICAL SKILLS

<u>Pilot Equipment:</u>	Spray Dryer, Belt Furnace, Rotary Calciner, Battery Assembly Line
<u>Battery Test Equipment:</u>	Maccor, Arbin, MTI/Neware, BioLogic, Some Custom Equipment
<u>Analytical Equipment:</u>	TGA/Heat Analysis, SEM, EDX, XRD, UV-Vis Spectroscopy
<u>Process Skills:</u>	FMEA and HAZOP study, P&ID and Controls, Scale Modeling
<u>Computer Languages:</u>	Excel/VBA, Kaleidagraph, MATLAB / Simulink, Python, \LaTeX , LabView
<u>Human Languages:</u>	Native English, Working German and Spanish. Beginning Mandarin.

INTERESTS AND ACTIVITIES

<u>Physical Activities:</u>	Épée and Sabre Fencing, Sailing, Camping
<u>Leisure Activities:</u>	Travel, Cooking, Homebrewing
<u>Scouting:</u>	Eagle Scout 2010, Instructor at Broad Creek Scout Camp (2009-2013)