



Tim Larson

April 2022 – Present

Medical Leave of Absence

Research & Development (R&D) Engineer

Avium LLC

Part of founding a startup focused on the sustainable production of hydrogen using a novel electrocatalyst to improve water electrolysis efficiency

July 2020 - April 2022

- Responsible for all data analysis; compiled and interpreted large sets of current/voltage data into concise and informative plots, tables, and drawings to help understand catalyst effects
- Designed, implemented, and performed extensive electrochemical lab experiments and presented results to supervisors effectively and efficiently
- Assisted in the growth of a small startup with a constantly changing environment; demonstrated flexibility and adapted quickly to new procedures

Noteworthy Projects

- Proposed and delivered a Python application to visually read and log process data from an electrolyzer system that lacked inherent data-logging capability, saving Avium \$10,000+ and hundreds of man-hours
- Co-Author: Tess E. Seuferling, Tim R. Larson, Joseph M. Barforoush, and Kevin C. Leonard “Carbonate-Derived Multi-Metal Catalysts for Electrochemical Water-Splitting at High Current Densities.” ACS Sustainable Chemistry & Engineering, 9, (49), 2021, 16678-16686
- Barforoush, Joseph. 2023. In-situ coating of an electrode using a novel electrocatalyst. US Patent 20230013895A1, filed July 6th, 2022. Patent Pending

Engineering Intern

KDHE: Bureau of Water

Government work for the state of Kansas specializing in water and wastewater safety and infrastructure.

Summers of 2018 & 2019

- Analyzed and revised permit applications and engineering schematics for non-discharging lagoons and sewer extensions
- Organized and maintained spreadsheets for outflow, geological, and rainfall data to assist permitting decisions and continuously improve the workflow for higher level engineers
- Inspected wastewater and drinking water treatment plants and performed analysis of stream and lake water chemistry

Instructor/Supervisor/Tutor

Kansas Algebra Program

Math 101 and 002 courses offered with built-in support in the form of small class sizes, tutoring, and a Help Room

August 2017 - May 2020

- Managed and instructed a class of 23 students on my own by preparing three engaging lectures a week, grading all coursework, and holding office hours
- Promoted to supervisory role to oversee and train other teaching assistants and ensure that all grading and logistical tasks were completed on time



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Education

- University of Kansas – Lawrence, KS 2016-2020
- Bachelor of Science in Chemical Engineering

Skills

Software

Microsoft Office
Fusion 360
AutoCAD
Revit
LABView
ASPEN HYSYS
Adobe Illustrator

Computing

Python
HTML
CSS
Visual Basic for Applications (VBA)

Physical

Lab protocol and safety
Small scale fabrication
3D printing

Interests

Sustainability
Material Science
3D Modeling
Electronics
Graphic design
Creative writing