

Zachary Luscher

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SUMMARY

: 4+ years of experience in technical design, materials engineering, and process optimization. Proficient in **AutoCAD**, **SolidWorks**, and other **CAD** tools, with a strong understanding of drafting standards, model space, paper space, and technical drawing production. Experienced in engineering design processes, ensuring precision and compliance in design documentation. Seeking to leverage expertise in technical problem-solving, and project leadership to contribute to efficient and innovative design projects.

AutoCAD	Javascript	Python	Other	Material Science
Solidworks/Altium	ES5/ES6+	Keras/Pandas/Numpy	Communication	Instron
SCADA Systems	React Hooks	SQL Alchemy	Safety	SEM
Electrical Controls	ReactJS	Langchain	Adaptability	TES
LTSpice/Synchrophasor	Node.js	C++ EBS	R	XRD
Revit - Bluebeam	RESTful APIs	Postgres SQL		TMV
SWPPP CESCL				

EXPERIENCE

Designer II

Chugach Electric

Anchorage, AK

May 2025 - Present

- **Distribution Engineering:** Electric Design and high voltage client interactions for residential and commercial development.

CAD Operator

Chugach Electric

Anchorage, AK

March 2025 - April 2025

- **Engineering Contract:** **AutoCAD** support for electrical utilities and database archiving.

Project Engineer EIT

Northern Geotechnical Engineering

Anchorage, AK

May 2024 - March 2025

- **Engineering Consulting:** **AutoCAD** and Engineering Analysis for Boat Docks, Fish Processing Plants, Commercial and Residential Construction for a myriad of Civil and Chemical Engineering challenges.
- **Project Management:** Managed construction administration for civil projects, ensuring compliance with plans and specifications using **Bluebeam**. Performed quality control of construction site development. Supported project execution in heavy civil construction environments on the slope.

Graduate Metallurgist

Pogo (Northern Star Resources Limited)

Delta Junction, AK

April 2023 - March 2024

- **Mill Processing:** Worked directly in a fast-paced industrial environment adhering to strict safety protocols.
- **Metallurgy:** Processed and analyzed complex, multi-variable data on ore composition and equipment downtime to optimize a high-throughput ore processing operation. Increased key performance indicators including gold recovery by 1%, operational throughput from 200 to 220 tons per hour, and achieved \$600,000 in annual cost savings.

Research Engineer

BlackRock NeuroTech

Salt Lake City, UT

Dec 2021 - April 2023

- **Solidworks, Altium:** Generated **CAD** Device Schematics for PCB manufacturing and Patent Licensing.

- **Device Development:** Utilized Python for device development and data analysis of neurological devices. Created Neurological Devices using Wafer level Fabrication of spin-coated polyimide, mask-alignment, sputtered metallization, and Lift-off resist. Process Assembly to PCB and omenetics using soldering and ACF bonding.
- **Electrochemical Testing:** Cyclic Voltometry analysis performed using Autolab programmable interface to identify surface morphology changes and inter-trace impedance measurements for human implementation.

Process Engineer

Wasatch Product Development

Salt Lake City, UT

July 2021 - Dec 2021

- **IQ, OQ, PQ:** Wrote standard operating procedures for Automated and Semi-Automated Symex batching.
- **Quality:** Ensured product quality of Toothpastes, Lotions, Shampoos, Deodorants, etc., through necessary deviations, batching training, and formulations.
- **Business Management:** Maintained customer business relations through in-person customer product batching observation, auditing, and customer lunches.
- **Team Management:** Assisted maintenance and batching teams with mechanical and electronic errors, HMI issues, provided batch training to batching teams, and on-call management for any batching or filling-related errors.

Test/Debug Technician

Foxconn

Salt Lake City, UT

May 2020 - Aug 2020

- **CentOS Unix Bash and Python Scripting:** Aided in the manufacturing process of servers used in web hosting. Performed processor stress tests, built server racks, installed firmware, mounted webserver images, and ran tests for power supply, batteries, network switch, console, and debugging hardware and software errors using CentOS (Linux) and Python. Wrote scripts in Unix Bash and Python for identifying hardware errors.

Chemical Engineering Intern

Nevada Gold Corp (Barrick Gold Goldstrike)

Salt Lake City, UT

May 2019 - Aug 2019

- **Real Time Acidulation Prediction:** Using Python and Pi Process Book, set up means for data collection and optimized various processes around the plant. Most notably, programmed a real-time Acidulation Prediction for Acid flow in the Autoclave using Ore composition sensors, Machine Learning, and Data manipulation techniques, potentially saving a large amount of Sulfuric acid.
- **Raspi Temp, pH, ORP Sensors:** Programmed, Integrated into Pi Processing, and Installed Raspi Devices to record data for different aspects of the Processing Plant.
- **Other Assignments:** Stabcal analysis, Polysulfide Lab work, Sankey Plotting Flow of Gold Concentration, 3-D printing parts.

Materials Research Assistant

University of Utah (Materials Engineering Lab)

Salt Lake City, UT

Aug 2017 - March 2018

- **Characterization of Fluoropolymer Composites for Industrial Use (Published):** PVDF, ECTFE, ETFE: Biofilm surface analysis of struvite and calcium phosphate formation. PVDF, PFA: Polymer adhesive thermal crack propagation in ordinance with Paris's law.

EDUCATION

University of Utah

Bachelor of Science, Materials Engineering

Salt Lake City, UT

May 2021

Algo Expert, Algorithms Python and Javascript [Certificate](#) May 2022