

Zachary Luscher

zacharyluscher@gmail.com | 801-300-0995 | LinkedIn: [zluscher](#) | Github: [zluscher](#)
zachuscher.com Salt Lake City, UT 84102

EDUCATION

University of Utah

Bachelor of Science, Materials Engineering

Salt Lake City, UT

May 2021

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

Python	Javascript	Other	Material Science
TensorFlow	ES5/ES6+	C++ EBS	Instron
Numpy	React Hooks	Unix Bash	SEM
Pandas	ReactJS	VBA	TES
Selenium	Node.js	R	XRD
Django	Vue	SQL	TMV
SQLAlchemy	RESTful APIs	NoSQL	Wafer level Fabrication

EXPERIENCE

Graduate Metallurgist

Pogo (Nothorn Star Resources Limited)

Delta Junction, AK

April 2023 - Current

- **Mill Processing:** Working directly; boots on ground, hard hat, and respirator in Gold Extraction and Refining Operations in excess of 10,000 oz per week. 200 tons/hour.
- **Metallurgy:** Flotation particle size and reagent testing, cyanide probe maintenance, carbon loading characterization, multi-variable data analytics on ore composition, equipment downtime effects on recovery and ounces produced.

Research Engineer

BlackRock NeuroTech

Salt Lake City, UT

Dec 2021 - April 2023

- **Device Development:** Creating 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
- **Solidworks, Altium :** Generate Device Schematics for PCB manufacturing and Patent Licensing

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:** Ensure product quality of Toothpastes, Lotions, Shampoos, Deodorants etc... through necessary deviations, batching training, and formulations.
- **Business Management:** Maintain customer business relations through in person customer product batching observation, auditing, and customer lunches
- **Team Management:** Assist maintenance and batching team with mechanical and electronic errors, HMI issues, provide batch training's to batching team, 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:** Aid in the manufacturing process of servers used in web hosting. Performing processor stress tests, building server racks. Installing firmware, mounting webserver image. Running tests for power supply, batteries, network switch, console, and debugging hardware and software errors using Centos (linux) and python. Writing 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 programming 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 Parisí law

PROGRAMMING PROJECTS

- [Audio Oscilloscope:](#)
- [Indeed Jobs Auto Apply:](#)
- [ON-Belay IOS APP:](#)
- [Vue CRM APP:](#)
- [Kickstarter - Visual Learning Triggered Device:](#)
- [Machine Learning Projects:](#)