

EDUCATION B.S. IE

Penn State Erie, The Behrend College

Dean's List

AIST Foundation Steel Intern Scholar

ACADEMIC EXPERIENCE

Research under the guidance of Jing (Julia) Zhao, Ph.D.

October 2024 – March 2026

- Developing a merged system between a Fanuc robotic arm & FDM printer to accomplish strength and printing benefits
- Interfacing machine controller, reception and interpretation of G-Code, synchronization extrusion and motion
- Developing efficient and cost effective plastic recycling strategy to close the material loop in additive manufacturing
- Optimized process parameter to reduce cost & energy consumption while maintaining effective material recycling

CMPSC-200H Semester Honors Project

January – May 2024

- Successful simulated warehouse operations within & applied several data clustering methods within MATLAB
- Leveraged MATLAB's functions to plan product waves, gathering orders, induction packing and processing

INDUSTRY EXPERIENCE

Donsco Inc.

Wrightsville, PA

Manufacturing Engineering Intern

May – August 2026

- Process control investigation due to an unexpected growth during heat treatment
- Gather and validated heat records, chemistry, lab microstructure, mechanical test results, scrap history by mold era
- Connected siloed data to leverage data analytics to discover insights, mapping variance stacks across (melt, mold, geometry, thermal cycles, sampling location) focusing on graphitization, cooling rates, inoculation practice, ferrite/pearlite balance
- Evaluated ultrasonic velocity as a predictor of iron nodularity leveraging statistics & engineering to draw correlations
- Machined calibration coupon, conducted a statistical dimension analysis, and designed testbench & fixturing
- Trained on resonant frequency testing for flaw detection as nondestructive inspection
- Built & implemented live machine shop KPI dashboard better connect supervisors with cells and operators
- Authoring code and SQL table connection to build an expandable and adaptable system for varying operations
- Web app tailed to involve supervisors through cell & part number management on the UI
- Modeling production & financial performance with executive UI to view create financial snapshots

ArcelorMittal Calvert *Previously ArcelorMittal and Nippon Steel (AM/NS Calvert)*

Calvert, AL

Project Engineering Intern

May 19th – August 13th, 2025

- Independently led three operational efficiency and sustainability projects (steam conservation & condensate recovery, automating chemical dosage, and batch anneal productivity reporting)
- Coordinated material, labor, and engineering for project financial feasibility
- Developed a financial model to justify investment, incorporating field data, steam energy loss and vendor specification
- Proposed combustion control, utilization of boiler pilot mode, and running one boiler to reduce natural gas usage
- Authored technical report analyzing steam infrastructure inefficiencies and proposing a solution
- Projected an IRR of 157% and first year ROI of 58.86% for the proposed steam line solution
- Retailored infrastructure for automating chemical dosage in wastewater treatment to reduce chemical waste
- Built a discrete event logging system to quantify productivity losses & throughput in batch annealing
- Introduced performance metrics, delay categorization, and process available

REA Energy Electrical Engineering Intern

May – August, 2024

- Created & designed data entry, analytics, and function of substation inspection app
- Gathered electrical phases & phase angles for substation phase diagrams to design & draft CAD drawings

TECHNICAL SKILLS

- Statistics: Minitab, ANOVA, t-tests & confidence intervals, regression, forecasting, clustering
- Data & Systems: SQL Server management, database connectivity, data mining, cleaning & structuring, KPI dashboarding (data visualization), MATLAB
- Modeling: Discrete event simulation, throughput & productivity modeling, engineering economics (IRR, ROI, capital justification), Fusion 360, AutoCAD,
- Design & Metrology: Fusion 360, AutoCAD, 3-2-1 fixture design, ultrasonic NDT, data acquisition & instrumentation
- Operations: Procurement, vendor coordination, process planning, technical reporting, Microsoft 365 (Excel, Word, Teams)

ENTREPRENEURSHIP

- Owner of **Project Company LLC**, overseeing operations, warehouse management, and product sales
- Developed warehouse intake system to automated SKU generation, barcode, locations and product traceability
- En route to deploy procedures for employment
- Well versed in business operation, financial management, marketing, data management, and scaling process
- Demonstrated strong business acumen
- Equipped with strategic vision and innovative ability
- Thrived with the ability to create using my strong work ethic, attention to detail, and resourcefulness
- Sampling population to collect nonbiased feedback to drive business direction