

# Jared Wiesen

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## EDUCATION

### Gannon University

Erie, PA

GPA 3.46/4.00

Bachelor of Science in  
Mechanical Engineering  
Spring 2016

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## SKILLS

### Programming/Software

MATLAB

Python

SQL

VBA

Microsoft

Minitab

ibaAnalyzer

ANSYS

LabVIEW

### Frameworks/Applications

OpenCV

Django

TensorFlow 2

Keras

Git

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## RELEVANT COURSES

### University Courses

Nanotechnology

Finite Element Method

Dynamics

Kinematic Mechanisms

System Dynamics and Control

Heat Transfer

Fluid Mechanics

Strength of Materials

### Online Courses (Udemy)

Python for Computer Vision  
with OpenCV and Deep Learning

Django 3 – Full Stack Websites  
with Python Web Development

Blockchain and Bitcoin

Fundamentals

Signal Processing problems,  
solved in MATLAB and in  
Python

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## RELEVANT EXPERIENCE

### Process Automation Engineer – Allegheny Technologies Oct 2016 – Present (Brackenridge, PA)

- Improved discharge temperature consistencies per piece, by communicating and executing trials that leveraged the controls of a walking beam furnace.
- Establish maintenance practices as a procedure for common instrumentation changes.
- Identify critical heating and rolling issues by performing root cause analyses (RCA).
- Utilize the RCA to develop a pareto of issues and prioritize tasks.
- Devise process failure mode and effects analyses (FMEA) and theorize solutions for possible deficiencies.
- Construct offline simulations of production to help generate the necessary heating and rolling model setups for specific products.
- Create simplified models of the dynamic control systems by executing detailed analyzes on the known input and output parameters.
- Define limitations and improvements of the mill adaptive variables and machine learning.
- Assist in the re-training of the mill neural network.
- Train other process engineers by documenting procedures and directly communicating daily tasks.

### Technology Intern – RTI International Metals June – Aug 2015 (Canton, Ohio)

- Conducted a Gage Repeatability and Reproducibility (Gage R&R) study in Minitab to verify measurement error of load cells.
- Re-calibrated load cells to align with the verifications of the Gage R&R study.
- Programmed summary reports of daily operation performance.
- Tested and documented densities of aluminum spall pieces by using a water displacement method.

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## PROJECTS

### Polymer Based Belt Tensioner – Senior Design Project, Aug 2015 – May 2016

- Designed a non-spring-loaded belt tensioner that reduces vibration, noise, and cost.
- Performed creep and tensile tests on different rubbers to determine an optimal base material for the product.
- Produced multiple 3D CAD models of the outer housing, inner shaft, and rubber base material.
- Identified possible failure modes by executing finite element analyses (FEA).

### Baseball Swing Analysis – Personal Development, May 2020 – Present

- Utilize deep learning and computer vision applications in MATLAB to train a convolutional and long short-term memory (LSTM) neural network.
- Apply the trained neural network model to identify and classify a given set of different baseball swings.

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## ACTIVITIES

### Head Coach – Team All American Baseball, Summer 2018 (Trafford, PA)

- Prepared practices and meetings; discussed rules/regulations, and communicated directly to parents, players, and assistant coaches about any concerns.

### Student Athlete – Gannon University Men's Baseball Team, Fall 2012 – May 2016

- Captain, 2014 – 2016
- Invest 25-30 hours/week for weight training, skill work, practice, games, and travel.
- National Collegiate Baseball Writers Association All-American Selection, 2016
- Scholar Athlete, 2016, 2015, 2013