KEVIN WELDON

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Education

TECHNISCHE UNIVERSITÄT MÜNCHEN
MSc, Computational Mechanics (expected graduation: October 2025) 10/2023 – Present
Courses: Computational Material Modeling/Mechanics, Continuum Mechanics, CFD, Structural Dynamics, Advanced/Nonlinear FEM, AI in Computational Mechanics, Software Lab, Computation in Engineering, Introduction to Deep Learning, Stochastic FEM, Advanced Fluid Mechanics, Computational Plasticity, Damage & Fracture, Soil Vibrations, Functional Analysis, Structural Optimization, Technical Acoustics, German B2.1
Thesis: "Reducing corner singularities in soil models with the Wave-Based Method and special-purpose enrichment functions"

UNIVERSITY OF PITTSBURGH
BSc, Mechanical Engineering (magna cum laude) 8/2015 – 5/2019
Nuclear Engineering Certificate
Pitt Triathlon Club, Pitt Club Cross-Country, Pitt Hurling, DesignHub, Catholic Newman Club, German Club, Pitt Human-Powered Vehicle Team, Pi Tau Sigma Mechanical Engineering Honor Society

HEMPFIELD AREA HIGH SCHOOL
High School Diploma (honors) 8/2011 – 5/2015
Cross-Country Team (co-captain), Track & Field, Model UN, National Honor Society, Art Honor Society, German Honor Society, Science Honor Society, German Club, Science Bowl, Outdoor Odyssey Youth Mentor, Boy Scouts

Work & Research Experience

WESTINGHOUSE
Mechanical Engineer II, Cranberry, PA 7/2022 – Present

- Supported startup and commissioning of new nuclear plant construction, performing on-site mechanical inspections and authoring ITAAC reports to satisfy NRC license requirements.
- Led analysis of reactor hot piping system performance data during Hot Functional Testing to validate instrument accuracy and system response.
- Conducted a comprehensive reliability and maintenance study for an overseas client, evaluating critical reactor vessel components and delivering a detailed risk assessment to outline known industry issues and recommend a long-term asset management strategy.
- Contributed to license renewal applications by updating and verifying engineering calculations for primary systems at operating plants.
- Developed preventive maintenance optimization studies for utility clients—issuing Change Recommendations that cut labor hours while maintaining system reliability.

- Tools: NavisWorks, AutoCAD, ANSYS Mechanical APDL, MATLAB, FORTRAN

FS-ELLIOTT

Salesforce Systems Engineer, Export, PA — 3/2022 – 6/2022

- Served as Salesforce administrator and developer, managing automation projects that unified sales and service data across departments.
- Built custom Apex and Lightning features to streamline quoting and customer tracking workflows.
- Tools: Salesforce (Apex, Lightning, Process Builder)

Applications Engineer, Export, PA — 10/2019 – 3/2022

- Designed and quoted multi-million-dollar centrifugal compressor systems for clients in oil & gas, chemical, industrial manufacturing, and air separation industries.
- Acted as lead engineer for retrofit and upgrade projects, coordinating mechanical, electrical, and control system changes for global installations.
- Performed aerodynamic component selections for customer-specific flow and performance targets.
- Tools: AutoCAD, Epicor ERP, DocuClass

UNIVERSITY OF PITTSBURGH

Research Assistant, Dr. Anne Robertson Lab — 5/2019 – 12/2019

- Designed and fabricated a salt graft packing device prototype for coronal arterial bypass research, integrating an Arduino-based system for geometric sensing and iterative mechanical testing.
- Tools: SolidWorks, Arduino

Research Assistant, Dr. Jeffrey Vipperman Lab — 11/2017 – 1/2018

- Built and tested a friction measurement apparatus for material evaluation in a novel surgical retractor design.
- Tools: SolidWorks

Work & Research Experience (cont.'d)

HOCHSCHULE KAISERSLAUTERN - PIRMASENS (DAAD RISE)

Research Intern, Pirmasens, Germany — 5/2018 – 8/2018

- Developed and refined a tribometer test rig to analyze ski base friction behavior under freezing conditions, improving data accuracy and mechanical stability.
- Conducted side projects in composite repair and additive manufacturing, including VARTM carbon fiber layups for motorbike components.
- Tools: SolidWorks, Arduino

TESLA

Production Control Intern, Fremont, Calif. — 1/2018 – 4/2018

- Supported Model 3 and S/X production ramp-up by developing manual workarounds for in-progress automation systems and managing material flow constraints.
- Designed material handling fixtures and transport carts for component delivery to the assembly line; issued RFQs and built a vendor database ranking suppliers by cost, lead time, and communication quality.
- Performed quality control testing on newly installed automated conveyance systems for part organization and delivery; documented issues and coordinated change order corrections with the vendor.
- Implemented inventory control systems for powered industrial equipment, reducing downtime and saving the company $1M+ in operating costs.
- Tools: CATIA V5, AutoCAD, JIRA

KENNAMETAL

Engineering Intern, Latrobe, Pennsylvania — 7/2017 – 8/2017

- Modeled and revised machining components in Siemens NX, updating tolerance schemes and design documentation for manufacturing release.
- Tools: Siemens NX

& ADDITIONAL PRIOR WORK HISTORY

Construction (WHV), Bay of Islands Oysters (Kawakawa, New Zealand)	5/2025
Ride Operator, Kennywood (West Mifflin, PA)	12/2018
Course Grader, University of Pittsburgh (Pittsburgh, PA)	1/2017 – 4/2017
Engineering Intern, PennDOT (Clearfield, PA)	5/2016 – 8/2016
Facility Assistant, Hempfield Twp. Rec Center (Greensburg, PA)	3/2015 – 6/2015
Dishwasher/Busboy, Bob Evans Restaurant (Greensburg, PA)	3/2013 – 6/2013
Landscaper/Grass Cutter, Self (Greensburg, PA)	5/2011 – 8/2015

Skillset

Current projects using Python, PyTorch, GitLab, C++, MATLAB, COMSOL, Inkscape;

Prior work using Navisworks, Salesforce, CATIA V5, Siemens NX, SolidWorks, Epicor ERP, Lotus Notes, DocuClass, JIRA, C, HTML, JavaScript, ANSYS Mechanical APDL, ANSYS Fluent, ANSYS Static Structural, Arduino, AutoCAD;

Fluency in mechanical simulations, USPTO patent database searching, customer interface

Languages: Native English, intermediate German (B2)

Leadership & Achievements

- Magna Cum Laude Graduate (Univ. of Pittsburgh) 2019
- DAAD RISE Scholarship 2018
- Pitt Human-Powered Vehicle Team, Vice President/Business Manager 2017 – 2018
- Pi Tau Sigma, Mechanical Engineering Honor Society 2017 – 2019
- Boy Scouts of America, Eagle Scout 2015