Nick Jonas

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SUMMARY

Senior B.S. Mechanical Engineering student with 4 engineering internships and extensive experience in product design, prototype development, and product manufacturing. Skills in PTC Creo, SOLIDWORKS, Autodesk Inventor, Arduino, ANSYS, and MATLAB. Devoting 20 hours per week as an NCAA Student Athlete while working 8 hours per week with full academic schedule.

EDUCATION

B.S. Mechanical Engineering | Milwaukee School of Engineering | GPA: 3.83 | Expected February 20XX

INTERNSHIP EXPERIENCE

Engineering Intern | Generac Power Systems, Inc. | Waukesha, WI | May – September 20XX
Project: Support current production of home standby generators to prevent production down-time.
- Managed progression of dual-sourced parts on life test units by creating automated Excel spreadsheet linked to work orders, reported weekly.
- Analyzed how adding a chamfer to a gear cover would affect its function and production process; proposed several solutions that ensured efficient manufacturing and adequate thread engagement of stator bolts.
- Created and managed DVP&R and facilitated testing to validate a new dual-sourced alternator.
- Completed Change Notices in PTC Windchill to update parts, drawings, and BOM structures to eliminate part sourcing inconsistencies.
- Collaborated with Industrial Design and Strategic Global Sourcing to create and source new badges and decals.

Project: Validate prototype muffler design by testing flow vs backpressure.
- Designed a jig in PTC Creo, created a test plan, executed backpressure vs flow testing, verified that prototype muffler flow met specification of previous muffler design, reported results to team.

Project: Design accessory for home standby generators to meet sound specifications for market in India.
- Designed add-on sound baffles in PTC Creo, iterated design according to sound and performance testing to meet requirements for India.

Project: Organize and track $500,000+ of prototype parts throughout build process.
- Implemented labeling and transportation protocol, created Excel spreadsheet to track parts in the future.

Project: Estimate makeup of home standby BOMs by material mass and volume.
- Calculated and reported material makeup by mass, volume, and percent to upper management with accompanying confidence levels; report used to analyze effect of commodity price fluctuation.

Production Intern | Wisconsin Stamping & Manufacturing | Germantown, WI | May – Sept 20XX
Project: Produce parts using metal manufacturing equipment.
- Performed brake press, robotic welding, laser cutting, thread rolling, wire forming, CNC machining, and assembly operations on the production floor.
- Set up brake press machines for running production parts and worked with quality department to ensure compliance with part prints.

Mechanical Engineering Intern | Kohler Co. | Kohler, WI | May – September 20XX
Project: Design and develop a fuller spray technology for use in future showering products.
- Designed a shower head in PTC Creo that incorporated a rotating element to quickly divert water into subsections of the shower head and achieve a fuller spray with more nozzles than otherwise possible.
- 3D-printed and tested prototypes, iterating to eliminate problems with backpressure and low spray force.

Project: Create a kitchen faucet prototype with hidden swivel soap dispenser within one week.
- Designed and fabricated faucet prototype with requested soap dispenser and integrated Arduino electronics to control soap dispensing.
- Programmed the Arduino and supplied the prototype for demonstration with a large merchant.

Project: Determine the most intuitive and preferred design for handshower docking.
- Modeled and 3D-printed new and existing geometries for handshower docking and conducted a user-experience study within the company before presenting results to the team.

Process & Manufacturing Intern | Advanced Plating Technologies | Milwaukee, WI | 20XX –20XX
Project: Create and improve documentation of equipment and facilities.
- Created CAD models and drawings in Autodesk Inventor of plating lines for internal use and racks for outsourced tooling RFQs.
- Created vector drawings in Adobe Illustrator of the entire facility, including wastewater treatment and steam fitting systems, for company's contingency plan and internal use.

Project: Complete quotes and production for electroplating jobs.
- Calculated surface areas & throughput, then planned & executed plating jobs when business was awarded.

MECHANICAL ENGINEERING PROJECT EXPERIENCE

Senior Design Project | Team of 6 | Sponsor: Aldon Company, Inc.
Objective: Develop an automatic "Dead-Man" friction brake assembly for a railroad supply cart to replace manual system and increase safety.

HVAC Design Project | Applied Thermodynamics
Objective: Optimized HVAC system for minimal cost in a 2,000,000 ft^3 dorm building using MATLAB scripts.

INDEPENDENT PROJECT EXPERIENCE

Media-Backer Removal Knife | Lutheran Printing Services | January 20XX – April 20XX
- Designed a 3D-printed knife for cutting back-liner off vinyl adhesive without damaging the media; iterated design upon customer feedback to increase product's durability and ease of use.

Trailer Hitch Bike Rack | May – September 20XX
- Designed a trailer hitch rack in SOLIDWORKS to hold 2 mountain bikes securely with fast and easy attachment and removal.
- Refined models and drawings with mentors at Wisconsin Stamping (after-hours) for intelligent fabrication using sheet metal and extruded tubing.

TECHNICAL SKILLS

- PTC Creo
- PTC Windchill
- QATrax
- Six Sigma
- SOLIDWORKS
- Autodesk Inventor
- MATLAB
- Lean Manufacturing
- Microsoft Suite
- DIAdem
- Cura
- ANSYS
- Fusion 360
- Adobe Illustrator
- Generac AC HSB Service
- Arduino

LEADERSHIP | CO-CURRICULAR INVOLVEMENT

Varsity High Hurdler | MSOE Track & Field | November 20XX – Present | 20 hrs/wk
Captain | MLHS Snowboarding Club | Winters, 20XX – Present
Member | MSOE Investment Club | February 20XX – Present

WORK HISTORY

Promotional Services | Marketing Connections | June 20XX – Present | 8 hrs/wk
Summer Event Helper | Arctic Glacier Ice | Summers, 20XX – Present
Event Staff Worker | MSOE Athletics | September 20XX – March 20XX | 6 hrs/wk