

Nicolas Hall

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Profile

Mechanical Engineer with IMI Norgren. Background in Mechanical Design, FEA, and Fluid Dynamics. In IMI's Graduate Program doing rotations in Business Development, R&D, Operations, and Project Management.

Education

Colorado School of Mines, Golden CO

Major: Mechanical Engineering
Minor: McBride Honors Program

B.S. Dec 2018 (*Cum Laude*)

GPA: 3.57

Experience

IMI Norgren – Graduate

2019-Present

Operations Rotation – Quality and RMAs

- Working to overhaul site RMA process for site in Rockford, IL. Reduced total open RMA count from 79 to 42. Turnover time reduced from 40 days to 18 days.
- Used Value Stream Mapping to identify and eliminate bottlenecks in RMA flow and implement First In, First Out system.
- Remainder of placement will be dedicated to 8D and A3 analysis to eliminate most common returns, working with Manufacturing and Assembly.

R&D Rotation – Automation Handling Growth Accelerator

- Generated new product for IMI Norgren under division's leading Growth Accelerator, addressing a new market with projected revenues of +£100 million.
- Designed multiple prototypes and test parts for both in-house and outside manufacture, selected necessary hardware, and produced all drawings and GD&T. Co-Inventor on 3 provisional patents.
- Produced and executed extensive prototype test plans.
- Presented multiple project pitches to IMI Exec and Board Members, winning increased project funding and renewal for subsequent sprint cycles.

Business Development Rotation – Automation Handling Growth Accelerator

- Drove first sprint cycle of Growth Accelerator team as project manager, organizing global team with goal of identifying and delivering a new market with revenues of +£100million.
- Organized and helped conduct >70 customer interviews to identify opportunities, bust assumptions, and explore markets.
- Conducted in-depth market research on potential markets with customer lists, contacts, existing competition, and detail on opportunities.
- Presented mid-point and final pitches to IMI Exec.

Pratt & Whitney – Programs Intern

Jun-Aug 2017

- Assisted team in critical upgrade activities for newly delivered engines by managing field issues, suppliers, and planning fleet retrofits.
- Created retrofit planning databases that tracked field incidents, part availability and cost, repair and overhaul plans, and tied errors to known issues or allowed flagging for future investigation.

Colorado House of Representatives – Legislative Intern

Feb-May 2017

- Provided broad research for bills on healthcare, environment, and elections.
 - Created and maintained healthcare bill tracker.
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Engineering Team Projects

Senior Design Project: Continuous Casting Water Model

Jan-Dec 2017

- Project Manager – managed schedule, budget, and formal documents over two semester project (as well as summer) while also doing extensive technical work.
- Designed and ran a water model of a continuous steel casting process with ability to simulate injection of argon gas, narrow face adjustment, and pressure measurement.
- Data collection of fluid flow and bubble formation for verification of computational model.

Machine Design Final Project: Assistive Dock Lift

- Designed 4-bar linkage lifting device and custom linear actuator.
 - Conducted extensive FEA, motion, and failure analysis by hand calculations and SolidWorks.
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Skills and Certifications

- **Engineering:** Mechanical Design, Fluid Dynamics, Thermodynamics, Heat Transfer, Circuits, FEA, Feedback Control, Material Processing, CFD, GD&T, CMM
- **Manufacturing:** Lean Manufacturing, Value Stream Mapping, 8D and A3
- **Computer:** MATLAB, SolidWorks, Inventor, LabVIEW, Mastercam, Oracle EBS, Mathcad, Arduino C, EES, G Code, Excel, Word, PowerPoint
- **Communication:** Public Speaking, Presentation, Technical Writing
- **Personal:** Top Performer, Empowered, Leader, Organized, Responsible

SolidWorks Associate Certification (Score 240/240)

Hobbies and Interests

- Love to ski, I have been skiing since I was 4 and do not plan on stopping any time soon.
- Avid home cook and baker, I have used COVID to perfect a mean sourdough.
- Aiming to complete all Colorado 14ers by 30. I am still intimidated by Little Bear (hardest 14er)