Michael Orland

Mechanical Engineer

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EDUCATION

University of Illinois at Chicago
Chicago, IL
BSME | GPA 3.51 | 8/2015 - 8/2019

Army Medical Department Center & School
Fort Sam Houston, TX
Nursing & EMT | GPA 4.0 | 4/2013 – 8/2014

WORK EXPERIENCE

United Airlines | Chicago, IL | Associate Project Manager PMA/OOPP Development
January 2020 – Present

- Leveraged engineering expertise to analyze aircraft component alternatives to further cost-reduction strategies
- Discovered and evaluated aircraft component reliability issues to develop solutions within a multi-departmental team
- Cooperatively established OOPP program to produce United owned components averaging 48% savings per unit
- Coordinated efforts between suppliers and cross-functional departments to identify, design, and produce 6 initial OOPP part alternatives with a projected annual savings of 1.3M
- Successfully managed and implemented 19 PMA alternative components projecting savings of 590k year over year
- Managed a total 41 PMA and OOPP projects while establishing vendor relationships, acting as a liaison between vendors and front line technical staff
- Established remote component "fit check" procedure with mechanics at Houston airport to install and assess quality and efficacy of proposed alternative parts and provide design improvement strategies to vendors
- Revised vendor technical drawings and designs to adhere to United Airlines engineering department standards

Compendium Engineering | Chicago, IL | Mechanical Engineering Intern
May 2019 – September 2019

- Led a team of interns in full spectrum product development to produce and test prototypes with applied working knowledge of CNC mill, 3D printing, injection molding and laser cutting
- Performed calculations relevant to different aspects of prototype design to meet client and safety specifications
- Applied working knowledge of CAD software to generate prototype concepts to present to clients
- Responsible for design iterations and testing of prototypes, and delegation of tasks to intern team

S&C Electric Company | Chicago, IL | Mechanical Engineering Co-op
August 2018 – December 2018

- Designed and implemented tools to streamline manufacturing process and reduce operator strain
- Fabricated tools and mechanisms used in manufacturing process using precision machining equipment
- Performed tests on new powder coating line, and adjusted automated settings leading to a reduction in rejected parts
- Designed a series of proposed directly heated cavity blocks to limit power consumption and reduce cycle time by 20%
- Created a DOE for injection molding analysis software which simulated 35 variations of heated cavity block design

Design Engine | Chicago, IL | Mechanical Engineering Intern
May 2018 – July 2018

- Accumulated ~200 training hours in both Creo and SolidWorks
- Assisted in teaching course material and modeling methods to industrial designers and engineers
- Assisted in development of *Solidworks Level 1* and *Plastic Part Design for Injection Molding* course content
- Prototype parts relevant to course material or used in course index

United States Army Reserve | Chicago, IL | Combat Medic & Licensed Practical Nurse
September 2012 – September 2018

- Participated in and lead monthly training on procedures for health care providers in combat environments
- Trained unit on different aspects of health care to strengthen understanding of life-saving techniques
- Maintained working knowledge of SOPs for support hospital installation and urgent care teams
- Undertook leadership roles within platoon to ensure proper chain of command

TECHNICAL SKILLS

- Project management, multi-departmental communication, management of strategic cost-reduction initiaives
- Design, drafting, and assembling mechanical systems using Solidworks, PTC Creo, and Solid Edge
- Static, fluid, thermal, and mold design analysis using Ansys, Ansys Fluent, and SigmaSoft
- Rapid prototyping to produce mechanical systems using SLA and FDM 3D printing, CNC mill, Laser Cutting