Abraham Plis

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SUMMARY OF QUALIFICATIONS

Industry Knowledge: In-depth experience with general automation engineering practices and advanced concepts of mechanical interaction, familiarity with CAD drafting standards, knowledge of physical and thermodynamic interactions, as well as knowledge of wafer-scale semiconductor manufacturing standards and FDA regulatory requirements
Software Knowledge: Familiarity with MATLAB, SolidWorks (FEA and CAD), AutoDesk Inventor/AutoCAD, Microsoft Office Suite (Excel, PowerPoint, Word, Teams, etc.), and JMP data analysis software
ExtraCurriculars: SAE/ASME Club involvement, Machine Shop Safety Certified

EDUCATION

Northern Arizona University | Bachelor of Engineering in Mechanical Engineering — Expected May 2024

- GPA: 4.0
- Alpha Lambda Delta Honors Society, SAE Club, Lumberjack Scholar, ASME Member

WORK EXPERIENCE

Product Engineering Intern | Medtronic Inc. — June 2023-August 2023

- Formulated transfer functions and control limits to allow implementation of process control monitor (PCM) screening early in the wafer fab process to effectively screen 94% of bad wafers and save $2.1 mil per year in avoided scrap cost
- Engaged in the documentation and qualification of a laser profilometer tool for an implantable cardiac monitor, facilitating a potential 35% reduction in scrap cost from the device metrology area
- Performed weekly analysis on ~10,000 incoming sapphire wafers to assess viability of copper feedthrough vias and notify management of trends in decreasing performance by chemical mechanical polish (CMP) method

Automation Engineering Intern | Shamrock Foods Co. — May 2022-August 2022

- Investigated $10 million material handling system using 8 months of product data, identified flaws in current arrangement, and prototyped improved high-velocity air circulation method projected to save over $35,000 and 100s of hours of downtime per year
- Measured, recorded specifications, and cataloged ~700 conveyor assets around facility, utilizing data to spearhead proactive belt replacement project for 36 high-incident conveyors reducing downtime by 40-50%
- Inventoried ~60 control cabinets around facility, documenting PLC parts usage in order to identify obsolete components and decrease downtime across all control cabinets and conveyor assets facility-wide
- Generated dynamic preventive maintenance checklist for 6 air compressor systems in order to isolate problematic performance trends based on OEM specifications for sustained operation

PROJECTS

RC Device Design Competition | SolidWorks, MATLAB — August 2021-December 2021

- Prototyped a 2.4gHz remote controlled device to facilitate the transport of 5 different material types with variable weight and geometry
- Manufactured pivotal mechanical and electrical assemblies that allowed for effective loading/unloading of material during competition
- Identified inefficiency in the overall design and cut down raw material expenditure by 50%
- Directed a group of 3 peers during the design and testing phase, leading to a 3rd place finish in a 25 team pool

SOHC Boxer Engine Design | SolidWorks — Jan. 2021-Feb. 2021

- Designed a functional 80 piece model of a Single Overhead Cam Subaru boxer engine in SolidWorks for educational purposes
- Illustrated the mechanical inner workings of a 4-cylinder engine in the boxer orientation with cutaway visual enhancements to highlight critical design elements

SKILLS

SolidWorks | AutoDesk Inventor | AutoCAD | MATLAB | NI Multisim | Microsoft Office Suite | JMP