ALEXA PACIFICO

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EDUCATION

University of Michigan, Ann Arbor
BSE Mechanical Engineering
Aug. 2021 - April. 2025
GPA: 3.2 / 4.0
Academic Programs: *Women in Science and Engineering Residence Program*
Notable Coursework: Design for Manufacturing; Statics; Modeling, Analysis, and Controls of Dynamic System

WORK EXPERIENCE

Walt Disney Imagineering   June 2024 - Aug 2024
Show Mechanical Engineering Intern - Orlando, FL
- Modeled concept designs for upcoming animatronic projects utilizing SolidWorks, conducted motor studies to validate torque and speed constraints, ran animation simulations to validate full functionality
- Designed a low production custom four bar mechanism with packaging and wire routing constraints, practiced iterative design techniques, utilized multiple ideation strategies such as analogical thinking and morphological analysis, communicated feasibility of design with the machine shop responsible for production
- Selected animatronic bearings utilizing Grubler's Formula, used company libraries to choose fasteners, studied properties of potential materials to determine necessary weight, stiffness, and strength
- Performed Rigid Body Dynamics (RBD) analysis to analyze the movement and Finite Element Analysis (FEA) using SolidWorks to ensure functionality at worst-case scenario for motor torque and hard stop stress analysis
- Proposed designs and conducted design reviews, collaborated with the creative and animation teams to ground the concepts in reality and develop a shared achievable vision for the animatronic figures.
- Documented Factory Acceptance Test (FAT) and Site Acceptance Test (SAT), verified and consolidated figure details for on site efficiency

BNSF Railway   May 2023 - Aug. 2023
Engineering Intern - Fort Worth, TX
- Designed the initial path for a new railroad using MicroStation and GIS, researched and implemented relevant railway laws the path must obey, and successfully presented and handed off project to Track Design Team
- Conducted preliminary research for an upcoming pilot program: reviewed and organized past data in Excel, compiled all data for easier processing, identified a plan of action and presented findings to supervisor
- Engaged with 5 different departments across 7 states to further develop an understanding of areas such as railroad track, signal, bridges, and maintenance, attended and presented at a regional intern showcase

PROJECT EXPERIENCE

Michigan Mars Rover Team
Chassis Subteam Member - Ann Arbor, MI   Sept. 2021 - April 2025
- Designed and improved mast mounts and gimbals utilizing Siemens NX CAD software, manufactured parts for battery mount, and differential bar using the mill and lathe, created and edited engineering drawings
- Integrated new members into the subteam, introduced and trained new members in Computer Aided Design, basic manufacturing practices, and design processes

SKILLS

Technical	SolidWorks, Siemens NX	ADAMS	Siemens Teamcenter |C++, Matlab |ShopBot operation	KineSim	Mill operation	Lathe operation	Basic manufacturing tools	Finite Element Analysis	Google Suites	
Language	Fluent in English	Working proficiency in French	