Harmandeep Gill

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PROFILE SUMMARY: Mechanical Engineer self driven to self improvement, learning, and improving on current skills through hands on experience and research.

EDUCATION AND CERTIFICATION

BS Mechanical Engineering California State University Northridge, Cumulative GPA 3.5 **Certifications:** Machine Shop Certification of Completion

MS Engineering Management California State University, Northridge Expected Graduation Date: May 2027

RESEARCH EXPERIENCE

Extended PRA and HRA with a Cause-Based Model for Human Error Dependency Feb 2024 - Present

- Defined and gathered key factors known as organizational factors that contribute to human error and creating models.
- Reviewed and evaluated research papers to determine eligibility for probabilistic risk assessments (PRA) and human reliability analysis (HRA) focusing on performance and safety aspects.

WORK EXPERIENCE

Construction Project Engineer April 2025- Present

- Read and interpret scope of work, plans, specifications, and meeting minutes
- Monitor project status and requirements
- Maintain on site control from office and ensure project is completed on time
- Create and manage submittals, COPs,CDs, and materials

Materials Management Technician Nov 2021 - Aug 2022

- Organized and stocked medical equipment in warehouse to ensure supply was available and ready at all times
- Delivered supplies around the hospital to support staff with any needs and concerns
- Keep accurate logs and records of material and inventory

PROJECT EXPERIENCE

Design and Build of Automated Plant System

- Collaborated in a team to develop a sensor-assisted plant monitoring system for home plants.
- Utilized various sensors to determine watering and sunlight needs of plants.
- Programmed an Arduino to activate a water pump and LED light based on soil moisture sensor readings.

Optimization of Water Bottle

- Collaborated in a team to develop an innovative water bottle with enhanced features, including a built-in pill box container, detachable bottom, and handle.
- Managed all deadlines and deliverables, ensuring timely project completion.

- Designed various parts of the water bottle using SolidWorks

Smart Morphing Wing

- Researched on bio-inspired drones with a team to better generate ideas for the design of the project.
- Developed a computational model to test the aerodynamic capabilities of team design.
- Utilized mathematical modeling to optimize and improve air foil designs.

SKILLS SUMMARY

- Perform Finite Element Analysis(FEA)
- Computer Aided Design for Modeling and Engineering Drawings (SOLIDWORKS)
- Perform Computational Fluid Dynamics (CFD)
- Team collaboration, critical thinking, and creativity skills
- Program sensors through LabVIEW
- Proficiency in Microsoft Office Products
- Compute logical tasks through MATLAB
- Compute data analysis and signal processing for MRI and CT using colab
- Fluent in English and Punjabi

EXTRACURRICULAR ACTIVITIES

- Vice chair for American Institute of Aeronautics and Astronautics student chapter (AIAA)
- Alumna of JOCO-ROBOS Robotics Team
- Former Student Ambassador of Johnston Community College
- Member of American Society of Mechanical Engineers (ASME)