Ezaan Ahmad

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Driven professional with a commitment to excellence and a quick-learning aptitude. Experienced in industrial automation, mechanical design, process engineering, and electrical systems. Proven record of delivering results in manufacturing and sustainability projects. Proficient in SolidWorks, Autodesk suite, and MATLAB, with additional skills in PLC programming and data analysis. Recognized with multiple awards for both technical skills and presentation excellence. Currently pursuing Six Sigma Green Belt and CSWA certifications.

EDUCATION

BSc in Sustainable Design Engineering Sep 2021 - May 2025
Specialization in Sustainable Energy Engineering
University of Prince Edward Island

- Graduated First Class Standing as a two-time Dean's Honours List Recipient
- Winner of the Canadian Society of Mechanical Engineers' Gold Medal Award
- Winner of the Most Innovative Design Project Award
- Recipient of the Public Speaking Professional Award by The UPEI Engineering Society
- Won the Best Business Solution while representing UPEI at ENGCOMM (in Montreal)

EXPERIENCE

Electrical Engineering Intern May 2024 – September 2024
Allan Equipment Manufacturing Ltd., PE

- Spearheaded a machine vision project to successfully monitor and control machinery outputs in real-time, using YOLO algorithms integrated with OpenCV on a Linux platform.
- Programmed PLCs using CODESYS to control motors in complex agricultural machinery systems, creating user-friendly GUIs for seamless interaction and monitoring of interconnected systems.
- Utilized Autodesk suite to design harnesses, control panels, wiring schematics, detailing connectors and wire sizes to ensure safety and functionality.

Engineering Intern May – September 2022 & 2023
Istidama, Qatar

- Collaborated with a team of engineers to mobilize a pilot project on waste management to obtain municipal approval for country-wide implementation.
- Designed and oversaw construction of company booth at national trade exposition with SolidWorks.
- Analyzed data generated by liquid food composters to generate usage statistics, fill times, and predict relief times for consumers through MATLAB.
- Learnt and demonstrated use of Lean tools such as Root-Cause Analysis (Fish-Bone Analysis/5Why), Value Stream Mapping, Network Analysis, Kaizen etc. and process performance metrics in areas of assignment to prioritize and maintain focus on identified improvement initiative.

PROJECTS

Potato Seed Cutting Solution Sep 2024 – Apr 2025
Allan Equipment Manufacturing Ltd., PE

- Redesigned current industry potato seed cutting solutions using a novel approach, allowing for a massive reduction in waste generation and increasing seed viability.
- Successfully designed an industrial solution to slice potatoes at high speeds using a custom stainless-steel blade, achieving a net throughput of 20 tons/day.
- Designed and built an industrial electrical control system to ensure adequate functioning of the whole system using three-phase, 208V input power.

- Automated the cutting process using a PLC by processing data from sensors and demonstrating precise motor control.
- Created drawing packages involving 3D models, engineering drawings, electrical schematics, layouts, and wire lists.
- Promoted efficient conversation between the client, student team, and technicians.
- Oversaw project expenditures and additional expenses to ensure budget compliance.

Real-time Open Seal Detection Sep 2023 – Apr 2024

Cavendish Farms, PE

- Redesigned the loss detection system at Cavendish Farms using Infrared (IR) sensing technologies.
- Promoted efficient communication between clients, student team, and technicians.
- Utilized MATLAB to observe seal temperature profiles through Infrared sensors, to build a program tracking real-time changes in production.
- Crafted CAD models of conceptual designs and prototype drawing plans using SolidWorks.
- Maintained a live Gantt chart and Bill of Materials using Microsoft Excel to monitor resource usage and ensure compliance with the budget.
- Scaled the tracking program to detect seals across 50,000 units hourly.

SKILLS

Computer Aided Design

- SolidWorks: Over three years of experience designing and simulating at UPEI, with multiple projects showcased in portfolio.
- Autodesk Inventor & AutoCAD Electrical: Applied core features during summer internship to design harnesses, panels, wiring schematics, and 3D assemblies, demonstrating proficiency and confidence in use.
- Autodesk Revit: Familiar with basic functionalities and actively expanding knowledge through ongoing learning.

Computing

- Microsoft Office Suite: Over three years of experience with Excel, Word, Projects, Teams, PowerPoint, etc. at UPEI. Data entry and analysis using Excel at *Istidama*.
- MATLAB Suite: Over three years of experience analyzing data at UPEI. Data analysis at *Istidama*. Certified Onramps for SIMULINK, SIMSCAPE, and MATLAB.
- LabView: Over two years of data procurement and analysis using LabView in tandem with MATLAB.
- Python: Experience developing machine vision systems to detect, count, and analyze products and processes.

General

- WHMIS certified since 2021 with a proven ability to work safely in individual and collective environments.
- Certified White & Yellow belt Lean Six Sigma
- Working knowledge of welding and machining principles.
- Successfully constructed multiple prototypes by collaborating with Engineering Technicians.
- Developed safety solutions for hospital environments, enhancing patient safety.
- Strong client communication experience, ensuring effective project alignment with needs.
- Award winning public speaker, with experience presenting complex technical solutions at design expositions, competitions, and client presentations.
- Working knowledge of Lean principles such as Value Stream Mapping, Root-Cause Analysis, Toyota's Kaizen philosophy, etc.