

# Khaled Younes (EIT)

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## Highlights

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- Graduated with a Bachelor of Sustainable Design Engineering (GPA: 3.93, Dean's Honors List 2021-2024)
- Strong expertise in SOLIDWORKS CAD design, having created detailed models for engineering prototypes
- Experience with control logic programming, including personal projects using Arduino IDE, LOGO Ladder Logic, and basic exposure to Siemens Ladder Logic
- Contributed to P&ID documentation, cost estimation, and procurement support for project proposals, assisting in budget planning
- Conducted performance testing and analysis, including jar tests for water treatment systems and engineered systems evaluation
- Graduated from the Study & Stay PEI Program, gaining career development and professional networking experience (Sep 2023 – Jun 2024)
- Worked with industry partners, including Cavendish Farms, Charlottetown Rural High School, Infinity Energy, West Royalty Community Center, and Stantec on projects focused on sustainable design engineering solutions
- Gained experience in fast-paced environments, developing strong communication and problem-solving skills, while working at Tim Hortons and McDonald's for 7 months after graduation as I pursued engineering opportunities.

## Education & Professional Development

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### Bachelor of Sustainable Design Engineering (GPA 3.93)

09/2019 - 04/2024

University of Prince Edward Island, Charlottetown, PE

09/2021 - 04/2024

- Dean's Honors List
- Academic Excellence Award

09/2021 - 04/2024

09/2021 - 04/2024

University of Prince Edward Island, Cairo, Egypt

09/2019 - 04/2021

- Academic Excellence Award

09/2020 - 04/2021

### Study & Stay PEI Program Graduate

09/2023- 06/2024

*A career development program designed for international graduates, providing professional networking opportunities, career guidance, and support in transitioning to the workforce in Prince Edward Island.*

## Engineering Projects:

### Integrating Water Treatment Systems into Potato Washing Plants

09/2023 – 04/2024

Cavendish Farms, New Annan, PE

- Produced Control Logic Flowcharts and Documentation for the potato processing plants.
- Provided a list of proposed components for the implementation of the control logic with cost estimations.
- Conducted jar testing, achieving an impressive 99% removal of Total Suspended Solids (TSS).
- Contributed to a system expected to save up to 183,000 gallons of freshwater per 3-week cycle in Plant 1 and 98,400 gallons in Plant 2.
- Contributed to the Piping and Instrumentation Documentation (P&ID) for the Plants
- Worked on confirming the flow rates in the plants.

## **Greenhouse Monitoring and Control System Design**

09/2022 - 04/2023

*Charlottetown Rural High School, Charlottetown, PE*

- Developed and tested a prototype of a greenhouse climate control system using Arduino.
- Programmed control logic in Arduino IDE to automate ventilation and shading.
- Integrated temperature and light sensors to dynamically adjust servo-controlled vents and stepper motor-driven shading.
- Helped refine the control system logic, ensuring it maintained a target temperature range for optimal plant growth.
- Assisted in researching sensor selection and component feasibility for future PLC-based implementation.
- Presented findings at an engineering expo, receiving positive feedback on automation and design.

## **Roof-mounted Solar Panel Cleaning System Design**

09/2021 - 04/2022

*Infinity Energy Co Egypt, Charlottetown, PE*

- Designed a full CAD model of a roof-mounted, automated solar panel cleaning system using SOLIDWORKS.
- Assisted in brainstorming, research, and initial design, evaluating cleaning mechanisms and feasibility.
- Built a functional prototype, integrating an air knife system to remove dust without using water.
- Conducted testing on air knife pressure, positioning, and cleaning speed, analyzing their effect on dust removal.
- Collaborated on adjustments to airflow and system parameters based on prototype performance.
- Presented findings at an engineering expo, communicating design challenges, testing results, and potential applications.

## **Skills**

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- **Computer-Aided Design (CAD):** SOLIDWORKS
- **Control Systems & Programming:** Siemens Ladder Logic, Arduino IDE, LOGO Ladder Logic
- **Data Analysis & Simulation:** MATLAB (Simulink, Simscape), LabVIEW
- **Technical Writing & Documentation:** P&ID Documentation
- **Project Cost Estimation & Budgeting:** Procurement Support
- **Team Collaboration & Problem-Solving**

## **Certifications and Awards**

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- **Engineer in Training (EIT) Certificate | Engineers PEI**
- **FSDE Design Expo Award – Client Interaction & Professionalism | University of Prince Edward Island | Apr 2024**

*Recognized for excellence in client interaction and professionalism during the senior design clinic in Year 4, working with industry partners like Cavendish Farms*