JOSE ALEMANY

Calgary, AB | (587) 700-8274 | jaalemanyh@gmail.com

Education

Lakehead University — Thunder Bay, ON **June 2026 – Present**
Bachelor of Engineering – Mechatronics Engineering

Southern Alberta Institute of Technology (SAIT) — Calgary, AB **2025 – 2026**
Mechanical Engineering Technology – Design & Automation

University of Moa — Cuba **Completed 3.5 of 5 years**
Mining Engineering

Skills

PLC & Controls: PLC Programming, Allen-Bradley, Studio 5000, RSLogix, HMI Development, PLC Integration
Robotics & Machine Vision: Industrial Robot Programming (ABB, RAPID), Machine Vision (IFM), Robot–Vision Integration
Fluid Power & Electrical: Hydraulics & Pneumatics, Pressure Control Valves (Relief, Reducing, Sequence, Unloading), Accumulator Circuits, Hydraulic Circuit Design, Electrical Circuit Theory (KVL/KCL)
CAD & Mechanical Design: SolidWorks, Fusion 360, FEA & Flow Simulation, GD&T, Drawings, Bill of Materials, Material Selection, Gears/Shafts/Bearings, DFMA
Engineering & Manufacturing: Preventive Maintenance, Root Cause Analysis (5 Whys), Lean Manufacturing, LCA
Programming: C++, RAPID
Standards & Software: ASME Y14.5, ISO 14040, Microsoft Word, Excel, Power BI

Projects

Robotics & Automation Integration Member — SAIT Automation Department **January 2026 – April 2026**
- Programmed and integrated an ABB IRB 120 industrial robot using RAPID for automated pick-and-place operations.
- Integrated an IFM O2D540 vision camera into the workcell for object detection and position identification.
- Developed and tested robot motion sequences for automated handling and placement of circuit breakers.
- Applied robot coordinate systems and transformations to relate vision-detected positions to the robot workspace.
- Designed and commissioned mechanical components including a custom end-of-arm gripper and work holding brackets.
- Troubleshot vision, positioning, and robot-motion issues during system integration and testing.

Spoiler Design — SolidWorks **Design Project**
- Designed a spoiler in SolidWorks and produced the full drawing package with GD&T applied to all drawings.
- Created the bill of materials and ran FEA stress analysis and flow simulations using the same material as the prototype.
- 3D printed a scaled-down prototype in carbon fiber reinforced filament.

Mechanical Power Transmission Design — Machine Design **Coursework**
- Designed a housing and shaft in Fusion 360, including key selection.
- Performed gear, roller chain, and bearing calculations for drive components.

Stirling Engine — Design & Build **Project**
- Designed and built a functional Stirling engine from a dimensioned drawing book, in hardware and SolidWorks.
- Assembled the full model in SolidWorks, selecting fasteners and hardware from McMaster-Carr.

Hydraulic Emergency Gate Circuit — SAIT Hydraulics & Pneumatics **Course Project**
- Designed an accumulator-based hydraulic circuit to actuate a grain silo emergency gate.
- Included a hand-lever emergency valve so non-technical operators can operate the gate quickly and safely.

Work Experience

Costa Vida — Calgary, AB **July 2019 – August 2026**
Front of House
- Coordinated workflow and timing to meet production schedules while maintaining quality standards.

Pedro Soto Alba S.A. — Cuba **June 2017 – August 2017**
Surveyor Assistant – University Co-op
- Operated a SOKKIA FX-150 total station and supported field surveying activities.
- Supported a four-person team, followed safety procedures, and worked to client requirements and service standards.

Certifications & Additional Information

Certification: Certified SOLIDWORKS Associate (CSWA), ID C-SAWYD65K7V | **Membership:** ASET
Languages: English – Fluent, Spanish – Fluent | **Activities:** Snowboarding, Motorcycling