Gibran Akmal

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EDUCATION

University of Calgary **Graduating: JUNE 2025**
Bachelor of Science, in Software Engineering *Calgary, AB*

SKILLS

- **Technical:** C, C++, C#, JAVA, PYTHON, PHP, SQL, React.js, ETAP, Altium, Pspice, LabView, Elsyca CatPro, Solidworks, Proteus, AutoCAD, Embedded Systems, Unity, Git, Linux, Microsoft Office, Power Bi, MATLAB, SimuLink, Compu Trace, Dialux, Visual Basic
- **Interpersonal:** Quick Learner, Independent, Innovative, Critical Thinker, Leader, Adaptability, Team player, Punctual

WORK EXPERIENCE

TC Energy **May 2023 – Present** *(Calgary, AB)*
Operational Support – Field Data & Engineering Intern

- Employed SQL and Python to build a threat tool that predicts likeliness of leaks based on certain pipeline wall thicknesses resulting in a 15% reduction in processing errors. Further utilized this tool for validating SEP recommendations when drafting SEP Tech Memos.
- Automated the data population procedure for field data, like NDE findings and Repair documentation, by building scripts in VB, Power Automate, and Power Query, reducing manual effort and human error by 25% as well as decreasing required quantity of on-site technicians.
- Utilized ETAP for electrical load flow and short circuit analysis for engineering support of new compressor design at the Hussar Compressor Station in Alberta. Was able to quantify and report 2 separate major sources of system loss to station teams.
- Leveraged LabVIEW's capabilities in instrumentation, specifically to tailor make sensor arrays and ILI data acquisition systems for each type of integrity defect (e.g. SCC, Geometry, and Metal Loss). Tested by reviewing over 30 pipe tallies from both EMAT and MFL Smart Pigs.
- Attended numerous site visits to integrity excavations and facilities such as compressor stations and meter stations while also working closely with PM team to review engineering deliverables such as Plot Plans, Scope Sheets, Tech Memos, As-Builts, Single Line Diagrams, etc.
- Used Elsyca CatPro to analyze Sacrificial and Impressed Current Cathodic Protection systems for buried pipelines by performing DC stray current analysis and monitoring rectifiers.
- Closely worked with the Engineering Support team for Heat Trace design using Thermon Compu Trace software for accurate BOQ determination resulting in a 5% cost saving.
- Collaborated with valve integrity team to assist in actuator maintenance efforts using AutoCAD for ball valves, gate valves, and globe valves.

Schulich Space Rover Team **Jun 2021 – June 2022** *(Calgary, AB)*
Electrical and Software Sub Team Member

- Implemented algorithms for autonomous navigation utilizing ROS and C++ for waypoint mapping, resulting in a 15% increase in efficiency of the rover's movements while no pilot is present.
- Leveraged computer vision and machine learning techniques in MATLAB to develop and implement real-time object tracking functionality for the rover, enabling the system to identify and track objects in its field of view which improved obstacle detection by 30%.
- Utilized Altium for schematic and PCB design, streamlining the integration of electrical components. Reduced PCB manufacturing costs by $20 per board while ensuring robustness and reliability in harsh environmental conditions.
- Conducted rigorous testing and validation of electrical subsystems using Oscilloscopes, Logic Analyzers, and LTSpice simulations. resolved hardware-related issues, increasing system reliability by 30% while meeting CIRC safety standards in different testing environments.

VOLUNTEERING

Step Forward Volunteering Association **Feb 2020 – Present** (*Calgary, AB)*
Member

- Assisted in the conception and execution of a charitable walkathon in support of the Students Against Domestic Abuse Association (SADAA) to raise awareness and funds for their cause of combating domestic abuse where we managed to raise about $20,000.
- Organized and executed food drives through donation stations setup across the university of Calgary to distribute sustenance for those in need.
- Contributed to the setup of the "Disney on Ice" community event by running the toy assembly station and serving children at the snack shops.

Code Ninjas **Dec 2022 – May 2023** *(Calgary, AB)*
Coding Instructor

- Taking students from a beginner level to a comprehensive understanding in software, game, and web development coding in languages such as JavaScript and C# over a series of classes, assessments, and collaborative challenges. Advanced topics included 3D modelling
- Assisted students with the development of their own coding projects, resulting in the successful completion of over 30 student projects.
- Delivered instruction to groups of up to 20 students, utilizing interactive and hands-on teaching methods to increase engagement.

AWARDS

Duke of Edinburgh Awards (Bronze and Silver) **May 2017 – 2018** *(NES Kuwait)*