Gibran Akmal

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EDUCATION

University of Calgary   **Calgary, AB**
Bachelor of Science, in Software Engineering   *Graduation Date: Aug 2025*

WORK EXPERIENCE

TC Energy   **Calgary, AB**
Data Engineering Intern   *May 2023 – Aug 2024*

- Employed SQL and Python to build a threat tool that predicts the likelihood of leaks based on pipeline wall thicknesses, resulting in a 15% reduction in processing errors. I further utilized this tool for validating Safe Excavation Pressure 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 and Power Automate, reducing manual effort and human error by 25% as well as decreasing the required quantity of on-site technicians.
- Regularly conducted code reviews and wrote unit tests, employing tools like Git and testing frameworks such as PyTest and Selenium to ensure code quality and adherence to best practices.
- Worked with containerization technologies like Docker and Kubernetes to create portable, scalable, and IS compliant applications. Specifically used in testing a deployment prototype of a dig-form pre-population software to run on a virtual machine.
- Developed a computer vision system leveraging deep learning algorithms and TensorFlow to automatically detect and classify corrosion on pipeline surfaces from inspection images. This system improved inspection accuracy by 30%
- Designed and implemented real-time data dashboards using Power BI and Tableau to visualize key performance indicators (KPIs) and operational metrics, improving decision-making processes.
- Attended numerous site visits to integrity excavations and facilities such as compressor stations and meter stations while also working closely with project management teams to review engineering deliverables such as plot plans, scope sheets, tech memos, as-builts, and single-line diagrams.
- Collaborated with the valve integrity team to assist in actuator maintenance efforts using AutoCAD to analyze models of ball valves, gate valves, and globe valves.

Code Ninjas   **Calgary, AB**
Coding Instructor   *Dec 2022 - May 2023*

- Amplifying students from a beginner level to a comprehensive understanding of 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 modeling, 3D printing, and circuits.
- I assisted students with developing their 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

PROJECT EXPERIENCE

Schulich Space Rover Team   **Calgary, AB**
Electrical and Software Sub Team Member   *Jun 2021 - Jun 2022*

- Implemented algorithms for autonomous navigation utilizing ROS and C++ for waypoint mapping, resulting in 15% fewer errors in route planning.
- 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 FOV, which improved obstacle detection by 30%.
- Utilized Altium for PCB design, streamlining the integration of electrical components. Allowing me to reduce PCB manufacturing costs by $20 per board while ensuring robustness and reliability in harsh environmental conditions. Tested boards with JTAG.
- Conducted rigorous testing and validation of electrical subsystems using oscilloscopes, logic analyzers, and LTSpice simulations, which resolved hardware-related issues and increased system reliability by 30% while meeting CIRC safety standards in different testing environments.

LEADERSHIP EXPERIENCE

Step Forward Volunteering Association   **Calgary, AB**
Member   *Feb 2020 - Present*

- We 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, and we managed to raise about $20,000.
- Organized and executed food drives through donation stations set up across the University of Calgary to distribute sustenance to those in need.
- Contributed to the setup of the "Disney on Ice" community event by running the toy assembly station and serving children at snack shops.

SKILLS

C, C++, C#, Java, Python, JavaScript, PHP, SQL, React.js, ETAP, Altium, Pspice, LabView, Keras, Solidworks, NoSQL, AutoCAD, Embedded Systems, CI/CD pipelines, Unity, Git, Linux, PyTorch, Power Bi, MATLAB, Simulink, AWS, Azure, OpenCV, VBA, TensorFlow, TCP/IP networking, ML, Scrum, Unit Testing, SSL Ubuntu, Bash, Pandas, NumPy, Scikit, Deep Learning, Scripting