|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Landan Reagan | |  |  | | --- | --- | | Calgary, AB |  | | (587)-575-4096 |  | | Landan.Reagan04@Gmail.com |  | | <http://www.linkedin.com/in/landan-reagan> |  | |

Third year Electrical Engineering student with a minor in Mechatronics and over four years of technical work experience. Highly motivated individual committed to problem-solving, critical thinking, and embracing the challenge of shaping the future of electric vehicles. Seeking to apply coursework knowledge and project experience to support the creation of sustainable, cutting-edge mobility solutions. Available for May-August 2024 internships.

# Skills

|  |  |
| --- | --- |
| * Python: Automation, Analytics, Machine Learning, and Data Visualization. * Experienced using Finite Element Method Magnetics for equipment optimization. * Skilled in designing, maintaining, and repairing commercial, residential, and industrial motor vehicles. * Developed electrical and mechanical aptitude with the ability to use hand, power, and measurement tools safely and effectively. | * Ambitious self-starter with the ability to design and implement innovative solutions while effectively managing a variety of other tasks. * Able to work effectively in remote locations with limited guidance or supervision in safety sensitive positions. * Strong teamwork, communication, and interpersonal skills; experienced in effectively communicating with audiences at all levels. |

# Experience

### May 2023 – Present

## Reliability Coop / Canadian Natural Resources Ltd, Fort McMurray, AB

* Developed an electrical troubleshooting device based on a PLC for the purpose of trapping intermittent over-temperature signals on variable frequency drives (VFDs).
* Automated key information extraction from asset downloads, accelerating vendor maintenance interactions and reducing the time-to-arrival for parts.
* Leveraged Python and SQL knowledge to analyze critical instrument spare parts database, resulting in a time savings of 224 hours.
* Analyzed failure trends to identify bad-actors and proposed upgrades based on cost, maintenance requirements, data availability, and vendor experience.
* Evaluated mean-time-failure for critical production assets and deployed preventative maintenance procedures resulting in a 150% increase in asset life.
* Interpreted Piping and Instrumentation Diagrams (P&ID) to asset critical instrumentation assets for the assessment of spare parts resulting in a familiarization with ISA5.1 standards.
* Assessed the risk of failure for production assets and determined the critical spare parts required to mitigate the possibility of downtime due to part lead-times.

### June 2022 – Present

## Electric Vehicle Technologist / EV Underground, Calgary, AB

* Conducted rigorous mechanical and electrical testing on high-voltage battery systems, including state of charge (SoC), depth of discharge (DoD), direct current internal resistance (DCIR), state of health (SoH), and cooling system pressure testing.
* Demonstrated strong communication skills by representing the company at the World of Wheels car show in Calgary, AB, effectively conveying complex electrical systems to the general public, showcasing an ability to engage and educate diverse audiences.
* Utilized 3D scanning technology to create CAD models for the design and implementation of EV components.
* Manufactured electrical harnesses for motor power and control, battery management, and vehicle accessories.
* Prepared schematics for high- and low-level electrical systems.
* Gained experience working on client-project basis, developing soft skills and experience explaining technical concepts and challenges to a non-technical audience.
* Collaborated with a small technical team on electrical design and implementation challenges.
* Utilized fabrication skills to design and manufacture mounting points and refurbish used components.
* Developed a strong understanding of electric vehicle components and systems.
* Maintained a high standard of safety while working in a high voltage shop environment.

### January 2022 – dEcEMBER 2022

## Telemetry Digital Systems Coop / Teck Resources Ltd, Calgary, AB

#### LTE networks (Aug 2022 – Dec 2022)

* Facilitated multidisciplinary team collaboration and information sharing, expediting project deadlines.
* Full cycle acquisition, testing, and documentation of market supplied network analysis tools and custom-built Raspberry Pi networking tools.
* Performed on-site network testing and verification under the supervision of a senior Electrical Engineer and unsupervised, allowing senior members to delegate attention to other matters.
* Responded to high priority site emergencies resulting from equipment failures.

#### Telemetry Systems (Jan 2022 – Dec 2022)

* Aided in the standardization of datalogger and sensor suit installation procedures improving connectivity troubleshooting, sensor trials and installations, and bad actor detection through monthly site visits and daily site technician support.
* Budgeted (~$40k), procured, and assembled a sensor deployment and component testing workspace within a multidisciplinary lab.
* Improved upon existing site connectivity evaluation resources, providing a more in-depth and realistic assessment of equipment communication network data retrieval.
* Evaluated heavy equipment electrical schematics for robust and efficient deployment of new sensors allowing for minimal downtime.
* Maintained the efficiency and security of critical real-time data transfer servers allowing for the continuous operation of the autonomous haulage fleet.

### March 2019 – December 2021

## Engineering Assistant / Shop Assistant / Blue Spark Energy Inc, Calgary, AB

* Developed a machine learning algorithm using Python for predicting tool health, resulting in reduced operational lost time while proactively maintaining and evaluating equipment prior to field deployment.
* Programmed quality control software utilizing Python which provided increased customer satisfaction due to scientific analysis of well parameters.
* Reduced equipment management costs via development of real-time monitoring of tool health and predictive maintenance.
* Performed and analyzed electric field simulations using Finite Element Method Magnetics software, capturing the cause of avoidable electric field losses during tool operation.
* Automated key value data extractions reducing redundant tasks and allowing for team members to better utilize skills on projects.
* Administered equipment tests allowing the lead electrical engineer to allocate time more effectively.
* Utilized scientific testing procedures for experimental equipment which aided in developing the companies understanding of tool operation.
* Maintained 100% safety compliance in tracking software with no incidents while on the job.
* Presented project updates to audiences at all levels of the company on a quarterly basis in adherence to company scorecards and project requirements.

### July 2018 – March 2019

## Forklift Operator / Order Builder / Coca Cola Canada, Calgary, AB

* Collaborated with drivers to ensure the safe and efficient transport of goods.
* Communicated with management and peers to maintain merchandise stock for order builders.
* Adhered to strict daily efficiency regulations resulting in responsible work habits with an emphasis on safe and efficient operation.
* Upheld safe operating procedures and suggested solutions to potentially hazardous situations leading to a keen eye for unsafe work practices.
* Maintained and operated battery powered machinery which provided exposure to high power electrical safety procedures.

### October 2017 – March 2019

## Retail Associate / Dollar Tree Canada, Calgary AB

* Resolved customer issues and addressed concerns.
* Provided a positive customer experience with fair, friendly, and courteous service.
* Distributed merchandise in an efficient and organized manner.
* Responsible for completing sales and balanced till at the end of the night.

# Extracurriculars Activities

## Vehicle Maintenance and Repair

* Experienced in the maintenance and operation of the following systems:
  + Suspension & Steering
    - Installation of new steering rack, shocks, and control arms – 2000 Jeep Cherokee Sport
  + Engine
    - Installation of new water pump, coolant lines, and timing belt – 2000 Jeep Cherokee Sport
    - Complete engine tear down and removal – 2005 Dodge Ram 1500
    - Spark plug and coil pack replacement – Multiple Vehicles
  + Wheels & Brakes
    - Installation of new brake pads, rotors, and calipers – Multiple Vehicles
  + Drivetrain
    - Replacement of front differential – 2000 Jeep Cherokee Sport
    - Driveshaft & U-joint replacement – 2000 Jeep Cherokee Sport
    - Differential, engine, transfer case fluid changes – 2000 Jeep Cherokee Sport

### January 2022 – January 2023

## Zeus Electric Motorsport / University of Calgary

* Motor Controller Team Lead
  + Completed hardware for test circuit of motor controller.
  + Managed a team of 3 in weekly meetings.
  + Communicated project updates to other teams and management.

## EV Conversion – 1972 Fiat 124 Spider

* Researched electric vehicle components and operation.
* Selected components for a higher horsepower drive system.

# Education

### September 2019 – PRESENT

## 3rd Year Electrical Engineering / University of Calgary

* Minor: Mechatronics Engineering
* GPA: 3.72

### July 2019 – August 2019

## Python for Machine Learning and Data Science Bootcamp / Udemy

* Gained knowledge on data analysis using Pandas and Numpy Python libraries.
* Acquired data visualization skills using Matplotlib, Seaborn, and Plotly Python libraries.
* Utilized knowledge to produce machine learning models capable of predicting tool failures in real time.

### May 2023 – June 2023

## An Introduction to Reliability Engineering / Udemy

* Measures of Reliability
* The Fundamentals of Strength-Stress Analysis and Z-Score
* Common Reliability Failure Distributions (Weibull and Bathtub Curves)
* Redundancy, Preventative/Predictive Maintenance, and Derating.
* Life Testing (Accelerated Life Testing, Highly Accelerated Life Testing, and Highly Accelerated Stress Screening)

### June 2023 – Present 2023

## The Complete Financial Analyst Course / Udemy

* Advanced Excel Orientation (Best Practices, Shortcuts, Functions, Charting, Pivot Tables, and Slicers)
* Building Flexible Models in Excel
* Working with Balance Sheets and Building a Complete 3-Statement Financial Model

# Certifications

* AIP Fall Protection [Exp: 30-06-2024]
* Construction Safety (CSTS-09)
* Field Level Hazard Assessment (FLHA) Training [May 2023]
* Lock Out / Tag Out Certificate [May 2023]
* Radiation Awareness and Nuclear Gauge Safety [May 2023]
* Workplace Hazardous Materials Information System (WHIMIS) 2015 [May 2023]
* Canadian Natural H2S Recognition and Safety (Exp. 28-06-2026)
* Confined Space Monitor / Entry (Exp. 28-06-2026)
* Canadian Natural Oil Sands Safe Work Permit (Exp. 10-05-2026)
* Canadian Natural Ground Disturbance Code of Practice (Exp. 11-05-2026)
* Transportation of Dangerous Goods (TDG) Awareness (Exp. 11-05-2026)
* Normalization of Deviance (Exp. 10-05-2024)

# Memberships & Affiliations

* Institute of Electrical and Electronics Engineers (IEEE)

# Coursework

**ENEL 400 – ENEL Design and Technical Communications (A-)**

* Programmed an autonomous robot that utilized machine learning to recognize hand signals via camera input for control.
* Developed an understanding of Raspberry PI micro-computers.
* Enhanced understanding of object-oriented python programming.

**ENEL 441 – Control Systems I (A)**

* Component modelling, constructing mathematical models of electro-mechanical systems, state space equations, PID controller design, and performance characteristics of feedback control systems.

**ENEL 469 – Analog Electronic Circuits (A-)**

* Developed a strong understanding of CMOS operation and logic implementation.

**ENEL 353 – Digital Circuits (A)**

* Developed a fundamental understanding of digital logic.
* Performed lab studies involving digital logic simulation using ModelSim.

**ENEL 335 – Programming Fundamentals of Electrical Engineering (A+)**

* Developed a strong understanding of object-oriented programming in C and Python.

**ENGG 349 – Dynamics (A+)**

* Gained experience in analyzing complex mechanical components.

**ENME 461 – Foundations of Mechatronics (A+)**

* Further developed knowledge of electro-mechanical systems and the various analysis techniques.

**ENCM 369 – Computer Organization (A-)**

* Lab studies on PIC microcontroller programming.