

Meet Patel

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EXPERIENCE

Cohu Inc.

Aug. 2022 – Present

Electrical Engineer II

Poway, CA

- Specialized in automation protocols for motor controllers, including **EtherCAT** and **CANopen**, to optimize semiconductor testers.
- Designed an innovative system architecture for the controls system to improve circuit board design efficiency for **Pick-and-Place Test Handlers**, resulting in a **15% reduction in production costs**.
- Led the transition from design to mass production by assessing factory test requirements and provided **troubleshooting support**.
- Mastered **motion control system tuning**, fine-tuning multi-axis servo and stepper motion for optimal precision and performance.

Tetra Tech

Jan. 2022 – Aug. 2022

Project Engineering Lead

Tiverton, ON

- **Reduced maintenance time by 24%** for sampling transformer oil by implementing a Dissolved Gas Analyzer with live alerts via LAN connection to determine deteriorating transformer condition.
- Marking **Transformer Design** field drawings using **Auto CAD** and reflecting the changes in the Main Control Room for replacement of Unit, Station and Distribution service transformers
- Examined the viability of electrical drawings on **Revit** to implement alternate solutions to meet project requirements.

xCraft UAV

Nov. 2021 – Aug. 2022

Software Engineer

Coeur d'Alene, ID

- Implemented obstacle avoidance protocols using **IR sensors, Lidar, GPS, and Image processing**.
- Simulated drone flight using **Mavlink** and **ArduPilot** to test UAV firmware parameters and performing flight tests.
- Implementation of the Ground station web application for **remote user interface**.

Ontario Power Generation

May 2019 – May 2020

Electrical Project Engineer

Pickering, ON

- Designed a **PCB** for I&C Obsolescence project to integrate with the pre-existing sensors in the station, **reducing maintenance time by 36%**.
- Designed electrical layout plans of parking lot on **AutoCAD** to effectively supply power to electronic vehicle chargers.
- Formulated **test plans and risk reports** for projects and held meetings to coordinate with stakeholders.

Alectra Utilities

May 2018 – Aug. 2018

Meter Data Management

Mississauga, ON

- Leveraged **SQL** within Microsoft Access to facilitate the merger process, harmonizing three distinct electrical meter data systems.
- Devised and implemented **Microsoft Excel Macros** to meticulously scrutinize data across the triad of meter systems, diligently rectifying discrepancies by cross-referencing variables such as weather patterns, meter malfunctions, and premises modifications.

EDUCATION

McMaster University

Sept. 2016 – May 2021

Bachelor of Engineering (B.Eng.) Electrical Engineering

Hamilton, ON

- **Coursework:** Electronic Devices and Circuits, Electric Motor Drives, Microprocessor Systems, Control Systems

SKILLS

Languages : C, C++, C#, MATLAB, Python, Java, JavaScript, SQL, Verilog, Assembly

Designing : Altium, Simulink, MultiSim, AutoCAD, PSPICE, Inventor, OrCAD, ETAP, Fritzing

Hardware : EtherCAT, CANOpen, Ethernet, I2C and UART communication protocols, low-power analog circuit design, DC/DC converters, Power Management ICs, digital circuit design, Li-ion Battery Cell Tester, Multi-layer PCB

PROJECTS

Smart Drone

- Repurposed smartphone as the drone's sensor hub, **reducing waste** by eliminating the need for additional sensors. Enabled precise drone flight control through **Bluetooth (UART)** communication of smartphone sensor data to an **Arduino** interface.

GyroSpoon

- Designed and developed a **self-stabilizing spoon** for Parkinson's disease patients, incorporating real-time data collection from gyroscopic and accelerometer sensors via **Arduino IDE (C++)** to actively counteract hand tremors.