Mitchell Stride

Electronics Engineering Student

Embedded Systems | PCB Dev.

30+ Unique PCB designs. Interested in electronics for embedded applications. Specialized in microcontroller based PCB Design. Experienced with electronics DVT and system instrumentation.

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St. John's, NL, CAN

Work Experience

Hardware Design Engineer – Co-op

Mysa Smart Thermostats – IOT Hardware

Sept 2020 – Dec 2020 | St. John's, NL

- ⇒ *Custom FT2232H USB2.0 HS to UART/JTAG programmer utilizing basic SI for series terminations, impedance, and length matching.*
- ⇒ *Test jig/fixture bed of nails PCB design for production.*

Hardware Verification Engineer – Co-op

Nokia – Telecommunications Hardware

Jan 2020 – Apr 2020 & Jan 2017 – Apr 2017 | Ottawa, ON

- ⇒ *Created verification test plans to execute in the lab. Provided schematic and routing feedback to lead designers.*
- ⇒ *Drafted ECOs to rework PCBs and optimize manufacturing.*
- ⇒ *Reworked complex HDI designs with 0201 size passives.*
- ⇒ *High current, multi phase, power supply stability testing.*
- ⇒ *Automated test scripting over telnet using Perl.*

Hardware Design Engineer – Co-op

Curtiss-Wright – Embedded Defense Solutions

Jan 2019 – Apr 2019 | Ottawa, ON

- ⇒ *Performed schematic, layout, and routing reviews for complex Intel and PowerPC based single board computers.*
- ⇒ *Created and performed DVT test plans on high speed signals using a 16GHz scope.*

Embedded Systems Engineer – Co-op

Kraken Robotics Inc. – Underwater Sonar & Robotics

Apr 2018 – Aug 2018 | St. John's, NL

- ⇒ *Designed 10+ PCBs and 2 embedded stacks for underwater robotics in rugged environments using KiCAD.*
- ⇒ *Evaluated solutions in the lab using rapid prototyping techniques with STM32 Nucleo development boards.*

Cross Asset Engineering Assistant

ExxonMobil – Upstream Instrumentation & Controls

Sept 2017 – Dec 2017 | St. John's, NL

- ⇒ *Designed analog and digital logic to optimize the Electrical Power Management System for an offshore oil platform.*
- ⇒ *Used the ABB 800xA software suite to create logic and HMI graphics for real time operator recommendations*

Education

Memorial University of Newfoundland

Bachelor of Electrical Engineering Co-op Program
Fifth Year, Expected Graduation April 2021

Technical

- ⇒ *PCB Design*
- ⇒ *HDI Multilayer PCB*
- ⇒ *High Spd. Digital Design and SI*
- ⇒ *DVT & PVT*
- ⇒ *SMD Soldering*
- ⇒ *Embedded Systems*
- ⇒ *Microcontrollers*
- ⇒ *Adv. Radio License*
- ⇒ *3D-Printing*
- ⇒ *CAD Modeling*
- ⇒ *Debugging*

Software

- ⇒ *Altium & KiCAD*
- ⇒ *Matlab & Simulink*
- ⇒ *Python*
- ⇒ *SPICE Simulation*
- ⇒ *Solidworks*
- ⇒ *C & C++*
- ⇒ *Mbed Framework*
- ⇒ *AVR Assembler*
- ⇒ *GIT, SVN*
- ⇒ *ABB 800xA*

Extracurricular

Paradigm Hyperloop – SpaceX Comp.

Electrical Team |Sept 2017 – May 2020

- ⇒ Sys. Design for 800V electric propulsion
- ⇒ 0.6kW PDB w/ LGA pkg design and assembly

Memorial SAE Baja

Electrical Lead |Jan 2018 – Jan 2020

- ⇒ Designed data acq. system & gauge cluster
- ⇒ FPV video sys. & LoRa communication

IEEE

Student Branch Chair |Jan 2017 – Jan 2020

- ⇒ Lead student branch, PCB design workshops

Projects

- ⇒ *IOT Smart Home*
- ⇒ *Nixie Tube Clock*
- ⇒ *FPV Racing Quad*
- ⇒ *PCB Reflow Oven*
- ⇒ *Wireless PWR TX*
- ⇒ *AUV Senior Design*
- ⇒ *Solar Tracking PCB*
- ⇒ *Auto Fish Feeder*
- ⇒ *Emerg. Light System*
- ⇒ *Relay Arduino Shield*

Interests

- ⇒ *HAM Operator*
- ⇒ *3D Printing*
- ⇒ *Motorcycles*
- ⇒ *RC Vehicles*
- ⇒ *Foosball*
- ⇒ *Hiking*
- ⇒ *Electronics Hobbyist*
- ⇒ *Wine Brewing*
- ⇒ *PCB Design (30+)*
- ⇒ *Basketball*