Peter Salik, Eng.

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EDUCATION

Bachelor of Electrical Engineering (B.Eng.)

June 2015: Concordia University - Montreal, Canada
Department of Electrical & Computer Engineering

Digital Systems Technologist (D.E.C.)

June 1999: Vanier College - Montreal, Canada

EXPERIENCE

2016, January - Present: REDSparx*, Digital & Power Engineer

(Research & Development Group) Full end-to-end embedded PCB product development, including electronic component selection and sourcing. Designed six products; some incorporating Lithium Polymer battery charging and output regulation. Created custom part libraries and performed electrical and design rule checks prior to manufacturing. Verfied GERBER files and followed up on manufacturing issues if needed. Produced BOMs and packing lists. Currently working on IoT products incorporating Embedded Artificial Intelligence.

2017, April - October: Peck Tech Consulting Ltd, Electrical Engineer

(Autonomous Drilling Group) Schematic/PCB Design/Assembly. Technology Evaluation/Selection. Documentation. Bill of Materials (**BOM**): Creation, Control, Management & Migration. Interface Schematic Design and Harness Assembly.

2007 - 2011: VIF Internet, VoIP/Broadband Technical Specialist

Consultant for implementation of VoIP & Broadband services(Cable & ADSL). Troubleshooting at all levels of network, remote problem resolution. Occasional managerial duties & authority.

1999 - 2000: Teleglobe Inc., GNMC Communications Officer

Validated/located network/circuit/trunk specific problems causing international communication faults. Identification and assignment of problem specific solutions based on problem specific assessments. Least Cost Routing. Supervised network operation during Y2k rollover.

PROJECTS

AVIONICS, Arduino Based DME
2014 (Concordia University)

Leader. Single Sensor & Microcontroller implementation of distance measuring equipment (DME). Designed/Programmed/Implemented an ultrasonic standalone unit to return slant range, ground distance and slant angle via backlit LCD and USB.

DSP, Engine Identification and Proximity Detection
2013 - 2014 (Concordia University)

Leader. Researched & developed an algorithm to alert when an automotive engine is identified by its acoustic signature and detected at a range of 2 meters.

EMC/EMI, Aircraft Crosstalk Evaluation
2013 (Concordia University)

Leader. PSpice modeling of laptop IEEE 802.11b & cellular GSM in near and far fields. Evaluation of the impact of each on aircraft navigation and communications systems. Shielding options subsequently recommended.

HHO ROCKET PROPULSION
2010 (Concordia University)

Designed the chamber used to extract, separate, filter and store HHO gases from water electrolysis to be used in a thruster design. Valve and safety design to protect during ignition process. Assisted with all aspects of thruster design.

HYBRID ENERGY, Woodvale 2009 Transatlantic Challenge
2009 (Concordia University)

Leader/Integrator. Design and implementation of a naval hybrid-energy system for a transatlantic competition. Design, requirements, task assignment, planning/cost control. Risk mitigation of solution functioning as an integral part of the naval vessel. **IEEE Mini-Grant Winner**.

Hardware Design
Sensors/Actuators
Autodesk EAGLE
SMD Soldering
I^2C/SPI/Serial
Smith Charts
Analog/Digital
ARINC-429
Robotics

Software Design
Arduino, Intel x86
PIC(8), Atmel(8)
Assembler, 68k
C/C++, Python
MPLabX

Algorithm Design
Signal Classification
Acoustic Ranging
FIR/IIR/Filters

Lab Equipment
Specturm Analyzer
Signal Generator
Soldering Station
Oscilloscope
Logic Probe

Science/Visualization
MATLAB/Simulink/Octave
MS Office/LaTeX/Scribus
LTSpice
Maple

Spacecraft Design & Analysis
Propulsion Systems
Orbital Mechanics