# Skill Palette:

**Software:**

* Java, Javascript, C/C++, C#, .NET Core, UWP app development, Python, PyQt, MIPS assembly, MATLAB, Linux, operating systems, multithreaded programming, data structure, Object-oriented programming, Software debugging

**IC design skills:**

* Cadence IC design tools, Verilog, CPU architecture, Digital logic, FPGA, Digital VLSI, Simple analog IC design

**Electrical theoretical skills:**

* MATLAB, Simulink, LabView, OrCAD PSpice, robotic manipulators, rovers, control systems, signal and systems, digital communications, CubeSat design approach

**Embedded Hardware skills:**

* Altium Designer, power electronics, 4-layer PCB Design, 0603 solderings, hot air rework
* Multimeter, oscilloscopes, function generator, digital analyzer, probe station, circuit testing,

**Embedded Software skills:**

* Bear metal board software development, Atmel studio, Microchip family microcontroller
* UART, SPI, I2C, USB, Wifi, Bluetooth, BLE, PWM, IoT，sensors, signals, and data acquisition

**Power generation and transmission:**

* 3 phase induction motor, 3 phase synchronous machine, DC motor
* Transformers, transmission lines, power distribution networks, Siemens PSS-E

**Mechanical skills:**

* Metal properties, thermal dynamics, basic mechanism design, spacecraft thermal design, simple structural analysis, NX

**Other skills:**

* Adobe Photoshop, poster creation, advertising, event organization club management.
* Tutoring
* Self-starter who loves technical challenges and who wants to learn
* Team player, problem-solving and analytical skills
* Good verbal and written communication skills
* Good interpersonal skills
* Time management, able to meet deadlines, hardworking, pay attention to details
* Microsoft word, powerpoint, excel

# Experience palette:

**Creative manager, Student tutor**

Excellassonde - North York, ON

2014 to 2015

* Advertised our tutoring service by creating and distributing posters and doing announcements before lectures.
* Worked as a peer tutor on first and second- year courses such as physics, Java, and C etc.
* Prepared and conducted interviews to recruit new peer tutors for our organization.

**Vice President**

Electrical Engineering Club for Students - North York, ON

2014 to 2017

* Co-founder the of club.
* Participated in the creation of constitution, club registration and other various administration tasks.
* Provided logistic support for events such as C Programming Tutorial, Armature Radio Building, and other various club projects.

**Electrical Subsystem Designer**

York university Space engineering nanosatellite demonstration group

2015-2016

* Revised existing power board PCB layout.
* Wrote payload handling application on NASA opensource OS core flight executive.
* Participated in battery qualification testing.

**Electrical Subsystem Designer**

Lassat CSDC yorku team (Canadian Satellite Design Challenge)

2016-2018

* Created a new schematic and layout library for the project.
* Designed the schematic and the layout of satellite solar panels using Altium designer.
* Prepared presentation and tutorials for new members of the team.
* Took part in revising various electrical subsystems of the satellite such as OBC, EPS, ACS boards.

**Research Assistant**

BioSA Lab York University

2018-2019

* Designed and developed a wireless gesture recognition glove with IoT products.
* Designed and developed a breath rate sensing system for small animals with IoT products.
* Gained experience with wireless technologies such as BLE, Wi-Fi, TCP, HTTP.
* Designed and developed a testing platform for a bio-sensor IC with Arduino and custom PCB.
* Managed BOM files and ordered PCB and components from manufacturers and suppliers.
* Assemble the PCB with hot air rework station which includes 0603 components and DFN6 ICs.
* Gained experience with various serial communication protocols such as SPI, UART.
* Gained experience with bio-sensor packaging with epoxy.
* Wrote graphical user interfaces with PyQt, C#, MATLAB.