# Jimit Patel

1201-555, Brimorton Drive, Toronto
jpatel.9715@gmail.com
416-618-1002

## Objective:

I am looking for an opportunity where I can learn new skills and utilize my existing software development, circuit designing & diagnosing, and other technical skills towards the growth of the Organization.

## Core Strengths:

Consistency, Self-Motivated, Attention to detail, Problem Solving, Team worker, Strong Interpersonal Communication skills, Quick Learner.

## Experience:

**Electronics Engineer**

*ACE Foundation*, India                                                                                                          2016-2017

- Designed, developed & modified firmware for embedded devices.
- Tested and debugged the system firmware.
- Designed PCB layouts and hardware structure for embedded devices.
- Integrating hardware and software of the embedded system.
- Prepared & maintained different reports, BOMs, and other technical documents.

## Education:

**Post Graduate diploma in Embedded System Design Engineering**

*Lambton College,* Ontario                                                                                               2018-2019

**Bachelor of Technology in Electronics and Communication Engineering**

*Charotar University of Science and Technology,* India

2012-2016

## Skills:

***Programming Languages:*** C, C++, Embedded Linux, FreeRTOS C, VHDL, Python, and Shell scripting.

***Hardware:*** Pocket-Beagle, Beaglebone-black, LPC_54114(Cortex M4 & M0), LPC_1769(Cortex M3), Raspberry-Pi, PIC-Microcontrollers and 8051 Microcontroller.

***Interface Buses & Communication Protocol:*** Serial(RS232/RS485), SPI,I2C,USART,USB,CAN,and TCP/IP.

***Simulation & Collaborative Software:*** GitHub, Eclipse, MCUXpresso, MPLAB, Xilinx, Keil, MATLAB, Proteus, Multisim, HFSS, Octave, Visual Studio, Linux (Ubuntu& Debian), Microsoft Office, Yocto project.

**GitHub link:** *https://www.github.com/jimit7*

## Completed Project:

**Pixy Pet**
- The Pixy Pet Robot is a lightweight autonomous "robot pet," which can track and follows different object using Pixy camera sensor.
- It has two brains.
- One implements the object tracking algorithm using LPC_54114 microcontroller & FreeRTOS C.
- Another implements object following algorithm Embedded Linux Machine (Pocket Beaglebone) and C++.
- USB & UART interface buses were used to established data communication between pocket Beagle, LPC54114 and Pixy Cam.

**Line Follower Robot:**
- Line follower robots follow a line marked on a contrasting background, a black line on a white surface.
- It works on a closed-loop feedback algorithm where the controller uses the feedback from the line sensor for correcting the path of the robot.
- The sensors are LED/LDR pairs, and the controller is an 8051 microcontroller which executes the desired feedback algorithm. 50:1 Gear motors are used for driving the robotic wheels.

**Digital Counter          :**
- Digital counter counts objects which pass through its sensor circuit. It can count from 0 to 999 and display it on 3 –Seven segment display.
- The sensor is made up of LED/LDR pair circuits, and the 8051 Microcontroller is used as a controlling device which is programmed using c language.

**Design of Multiband Antenna For wireless Mobile Communication devices:**
- The Design and simulation of this antenna is done in HFSS software.
- The antenna structure contains a novel triangular iterative design with coplanar waveguide (CPW) feed.
- It is Design on an FR4 epoxy-based substrate with dimensions of 70 x70 x1.6 mm$^3$.
- The antenna covers six frequency bands.
- The antenna resonates at 1.08, 1.34, 1.64, 2.07, 2.46and 4.08 GHz with measured bandwidth of 8.33%, 6.74%, 4.83%, 4.06% and 27.97%, respectively, and can cover GPS, L-band (us), WLAN, ISM, Bluetooth, UMTS and WiMAX frequency bands.
- The measured results real omnidirectional radiation patterns with 1.18 to 4.16 dbi gain

References Available on request