Jasdeep Dhillon

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Skillset

- Assembly Language
- C and C++
- Java and Python
- Keil RTX RTOS
- Keil MCB1700 Evaluation Boards
- FPGA and VHDL
- Altera Cyclone II
- Matlab and Simulink
- Labview
- PSIM, LTspice and EagleCad
- PCB Design
- Soldering & Circuit Assembly
- Arduino and Raspberry Pi
- AutoCAD and Unigraphics NX
- SolidWorks
- 3D Printer and Milling Machine
- Band saw and Drill Press
- Oscilloscopes and DAQ
- Digital Multimeter
- CAN, I2C and SPI
- Hardware & Design Prototyping
- Material Selection & Fabrication

Work Experience

UAV Field Technician Sept 2017-Dec 2017
Drone Delivery Canada

- Assembled a drone for training new pilots
- Simulated and created flight paths in MicroPilot Horizon and programmed drone to adjust speed around corners
- Integrated new sensors onto drones and field test drones

Research Assistant May 2017-August 2017
University of Waterloo

- Assembly and testing of Spatial Atomic Layer Deposition (SALD) system
- Redesign of reactor stand in SolidWorks and machining of stand
- Designing thermoelectric cooling for the reactor stand

R&D Engineer Sept 2015 - Dec 2015
Magna International

- Designed a PLC to monitor pressure and temperature data of paint booths
- Researched air balancing paint booths and controlling paint trajectory solutions

Projects

Autofuel (Capstone project)
- Designing and constructing a Cartesian robot to automate the vehicle refuelling process
- Responsible for mechanical and electrical assembly, SolidWorks design and machining

Search and Recovery Robot (University)
- Designed an automated vehicle to traverse and locate a base in a defined course

Light Painting Robot (University)
- Programmed a Fanuc robot to recreate a user's path to produce a light painting

Smart Lock System (Personal)
- Developed secure keyless entry lock and allows you to see who is at the door
- Schematic capture Pi based PCB to interface with low voltage peripherals and minimize power usage

Line Following Robot (University)
- Designed and soldered multiple circuits on PCB to create a line following and magnet sensing robot
- Programmed microcontroller in C

Bicycle Gloves (Personal)
- Gloves that provide direction to a cyclist through haptic feedback

Education

Bachelor of Applied Science *Honors Mechatronics Engineering, University of Waterloo, Sept 2012 –May 2018*

Interests

Design | Technology | Robots | Badminton | Hockey | Biking | Anime | Gaming