Jasdeep Dhillon
Mechatronics Engineering
University of Waterloo (2018)

jsdhillon3@gmail.com
(647)-993-9044
https://jasdeepsd.github.io

Skillset

Hardware

- Mixed Signal Electronic Design | LTSpice
- Power Electronics, Signal Filtering
- PCB Design, Schematic Capture | Eagle
- Soldering & Circuit Assembly
- Arduino, Raspberry Pi, Altera Cyclone II
- Hardware Prototyping
- Firmware Programming | FPGA, VHDL

Mechanical

- AutoCAD, SolidWorks, Unigraphics NX
- Mechanical Analysis | FEA, Materials, Thermal
- 3D Printer and Milling Machine
- Design of Electromechanical Systems

Software

- Assembly Language
- C and C++
- Java and Python
- Matlab, Labview and Simulink

Work Experience

Drone Delivery Canada | UAV Field Technician

September 2017 - December 2017

- Integrated new sensors onto existing drone and conducted field tests
- Designed a drone for training new hires
- Programmed flight paths in and coded a speed cornering function

University of Waterloo | Research Assistant

May 2017 - August 2017

- Assembly and testing of Spatial Atomic Layer Deposition (SALD) system
- Redesigned reactor stand ,in Solidworks, with thermoelectric cooling

Magna International | R&D Engineer

September 2015 - December 2015

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

Projects

Autofuel (Final Year Project)

- Designed and constructed a Cartesian robot to automate the vehicle refuelling process
- Responsible for choosing power supply, sizing motors and choosing hardware
- Assembled system, machined parts and created parts in Solidworks for 3D printing

Smart Lock System (Personal Project)

- Developed product to eliminate need for peripherals and introduce automation
- Captured PCB schematic to interface with low voltage peripherals, minimizing power usage
- Scripted Python based facial + voice recognition, while accounting for fail safes and security

Light Painting Robot

- Programmed a Fanuc robot to recreate a user's path to produce a light painting

Line Following Robot

- Designed and soldered multiple circuits on PCB to create a line following and magnet sensing robot
- Programmed microcontroller in C

Bike Gloves

- Designed prototype using Arduino
- Programmed app that communicates with Arduino through Bluetooth to notify biker what direction to turn

Accreditation

University of Waterloo,
Bachelor of Applied Sciences

- Mechatronics Engineering, 2018, Honours

Interests & Activities

Badminton | Biking | Sports Cars | Robots | Iot | Design | Technology | Music | Hockey |