

# NICK BEDI

Mechatronics Developer

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## EDUCATION

### **Mechatronics Engineering, UNIVERSITY OF WATERLOO**

JUNE 2019

- Honours, Option in Artificial Intelligence, Co-operative Program
- B.AS - Cumulative Average: 87%

## WORK EXPERIENCE

### **Autonomous Car Software Developer, WAVE LAB - U OF W**

MAY 2018 – AUG 2018

- Developed an automated calibration method for autonomous car sensor system

### **Embedded AI Software Developer, COHERENT LOGIX**

SEPT 2017 – DEC 2017

- Implemented convolution neural network algorithm on proprietary hardware

### **Localization Software Developer, AVIDBOTS**

JAN 2017 – APRIL 2017

- Implemented probabilistic mapping and localization algorithm for mobile robot

### **Research Assistant, NANO SCALE ADDITIVE MANUFACTURING - U OF W**

APRIL 2016 – AUG 2016

- Optimized aerosol jet printing parameters for production of a new nano-sensor
- Built viscosity and powder density measurement device

### **Life Science Automation Designer, ATS AUTOMATION**

SEPT 2015 – DEC 2015

- Validated multi-million-dollar drug packaging system

### **Mechanical Test Designer, SYNAPTIVE MEDICAL**

JAN 2015 - APRIL 2015

- Designed and built mechanical testing rigs for neural surgical robot

## PROJECTS

### **4<sup>th</sup> Year Capstone Project:**

SEPT 2018 – APRIL 2019

- Designed mechanical system, integrated cameras and motors
- Programed AI software and control algorithms into the multi-camera conference calling system

### **Autonomous Under-Water Vehicle**

JAN 2018 – MAR 2018

- Built waterproof hull, integrated 6 motors, a depth sensor, proximity sensors and a camera
- Programmed autonomous navigation functionality into miniature submarine.

## ACADEMIC AWARDS AND EXTRACURRICULARS

### **FEA – Best Overall Project**

NOV 2016

- Awarded \$1000 for project which minimized stress concentration in a carabiner using ANSYS

### **Sandford Fleming Foundation Award**

AUG 2016

- Awarded \$300 for outstanding written communication in work term report

### **Varsity Cross Country and Track Captain**

ONGOING

- Thirteen-time age group Provincial Champion and three-time Canadian National Champion

## SKILLS

- Mechanical: Solid Works, ANSYS, GD&T
- Tools: Raspberry PI, Arduino