

# Candice Ip

🏠 Website | 🌐 /candicei | in /candicei | ✉ candicejxi@gmail.com | 📍 Vancouver

## SKILLS

### Electrical

PCB layout, Altium, Hardware Noise Reduction, SPI, I<sup>2</sup>C, Soldering, Filtering, Amplification

### Software

**Fluent:** MATLAB, LabVIEW, C, **Proficient:** Python, RobotC **Familiar:** C++, Java, VHDL, Assembly

### Mechatronics

Embedded Programming, Closed-loop Control, Computer Vision, CAD, **MCU:** PIC, ARM Cortex, 8051

### Other Skills

Rapid Prototyping, Finite Element Analysis, Project Budgeting & Scheduling, Grant Proposal Writing, Coaching

## EXPERIENCE

### Stoko Design Inc. | Engineering Physicist

Oct 2018 – Present | Vancouver, CA

- My work spans researching, designing, and implementing new tools and collaborations to enable the development and testing of our current knee bracing product.

### Dynamic Optics | Project Coordinator & Mechanical Engineer

Jun 2018 – Oct 2018 | Port Coquitlam, CA

- Managed mechanical designs, optimized the optical and fluid subsystems, and coordinated among key industry stakeholders for the HyDRA optical mirror polisher project.
- Designed a automated slurry recovery system and developed preliminary designs for an optical metrology system using both commercial and experimental interferometry systems.

### Nanoplasmonics Laboratory | Research Intern

May 2017 – Aug 2017 | Victoria, CA

- Awarded an NSERC Research Award to perform analysis, literature review, and manuscript writing
- Co-authored two peer-reviewed papers in ACS Omega and SPIE Optical Trapping and Optical Micromanipulation.

### HRI Robotics Laboratory (RREACH) | Mechatronics Engineering Intern

May 2016 – Aug 2016 | Vancouver, CA

- Awarded an Undergraduate Student Research Award Fellowship for conducting clinical studies and developing the SleepSmart V2 prototype.
- Developed a working prototype of a digital conversion of the analog device implemented using a PIC 18F4550 microcontroller and various digital sensors.

### Max Planck Institute (MPSD) | Experimentalist & Software Intern

Jan 2015 – Apr 2015 | Hamburg, DE

- Developed LabVIEW and MATLAB software and hardware for optical instrumentation experiments and aided in conducting experiments.
- Contributions resulted in a peer-reviewed journal publication.

## SELECTED TECHNICAL PROJECTS

### Hardware Alpine Sensor | Software & Electrical Lead

Sep 2017 – Jan 2018 | Vancouver, CA

- Designed a low-powered and cost-effective weather monitoring device for Alpine regions.

### Electrical Impedance Tomography | Individual | 🌐

Nov 2017 | Vancouver, CA

- Implemented mathematical Green's Functions using finite element analysis to image an artificial tumor in MATLAB.

### Senior Engineering Design Competitions | Software & Management Lead | 🌐

Fall 2015 & 2017 | Vancouver, CA

- Competed in autonomous robotics competitions and presented to industry professionals; 1st in 2015, 3rd in 2017.

### Autonomous Item Retrieval Robot Competition | Software Lead | 🌐

Apr 2015 – Aug 2015 | Vancouver, CA

- Built and programmed an autonomous robot to navigate an obstacle course and retrieve targets; 1st in design quality.

## EDUCATION

### University of British Columbia | B.A.Sc., Engineering Physics | Minor in Commerce

May 2018 | Vancouver, CA

- A physics and applied mathematics program enriched by design fundamentals in electrical and mechanical engineering.

### Swiss Federal Institute for Technology (ETHZ) | International Exchange

Sep 2016 – Dec 2016 | Zurich, CH

- Studied Data Visualization, Physics, and Energy Technologies with the Department of Mechanical and Process Engineering.