

# Jayant Bhardwaj

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## Education

### University of British Columbia (UBC)

BACHELOR OF APPLIED SCIENCE IN COMPUTER ENGINEERING

Vancouver

Sep 2018 – May, 2022 (expected)

## Work and Volunteer Experience

### Astin Analytics

INTERN

- Developing the software for face recognition and thermal scanning, with alerts at high temperature
- Application Development
- Camera Testing
- POC to the customer
- Installation of Cameras & software
- Communication and coordination with customer IT team

Chandigarh, India

Aug 2020 – Present

### C.O.D.E. Hack

SENIOR ADVISOR

- Ensured the smooth functioning of the C.O.D.E. Hack Hackathon
- Testing and evaluating the technology being used.
- Training the organizers with more efficient and economical techniques for evaluating the submissions.
- Suggesting safer means of information exchange.
- Creating the architecture for the auto-graders of the event.
- Providing training in git to the organizers.

Chandigarh, India

Jul 2020 – Aug 2020

### Blue Chip Cafe (UBC Alma Mater Society)

BARISTA AND CUSTOMER SERVICE REPRESENTATIVE

- Process drink orders that range from basic to complex, quickly and efficiently
- Monitored inventory of supplies on hand
- Sell and merchandise other store products such as pastries, drinkware and seasonal items
- Take customer orders and process payments

UBC, Vancouver

Jul 2019 – Mar 2020

### UBC Advanced Research Computing (ARC) and Westgrid

VOLUNTEER FOR RESEARCH COMPUTING SUMMER SCHOOL

- Assisted professors throughout their presentation as a TA.
- Learnt about the possibilities that high performance computing and networking.

UBC, Vancouver

Jun 2019 – Jul 2019

### Smarter.Codes

INTERN ANDROID DEVELOPER

- Took inputs of voice packets from smartphones microphone, sent them over to AI API.
- Parsed the outputs and presented the result to the user in form of text and speech
- Consume APIs and invoke them from a mobile application

Bangalore, India

Nov 2017 – Dec 2017

### Hamari Kaksha

ENGLISH AND MATH TEACHER (VOLUNTEER)

- Volunteered to teach English and Mathematics to a group of 24 underprivileged children.

Chandigarh, India

Jan 2011 – June 2013

## Technical Skills

**Programming Languages:** C, C++, Java, HTML, Verilog, Assembly: x86-64, ARM

**Framework and Tools:** SolidWorks, MATLAB, Raspberry Pi, Android Studio, Arduino MCU  
Git, Linux/UNIX, Windows, IntelliJ, ModelSim, Quartus

## Technical Projects

### Interrupt Supported RISC Machine (Sep-Dec 2019) (UBC)

*Verilog, Assembly: x86-64, ARM,  
DE1-SoC, ModelSim & Quartus*

• DESIGNED AND IMPLEMENTED A 16-BIT INSTRUCTION SUPPORTED CPU ON THE FPGA BOARD DE1-SOC USING VERILOG, QUARTUS, AND MODELSIM. • I/O INTERRUPT SIGNALS VIA EXTERNAL KEYS AND SWITCHES WOULD CAUSE THE STATE MACHINE TO FINISH THE CURRENT INSTRUCTION, SAVE THE CONTENTS OF ITS REGISTERS, FLAGS AND PROGRAM COUNTER, RETRIEVE THE ADDRESS OF THE INTERRUPT SERVICE ROUTINE FROM A PREDEFINED LOCATION IN MEMORY, AND UPDATE THE PROGRAM COUNTER WITH THE ADDRESS.

### A Virtual Memory and Multi-process supported OS (Sep-Dec 2019) (UBC)

*ARM assembly, Intel FPGA Monitor  
Program, FPGA board DE1-SOC*

DESIGNED AN OPERATING SYSTEM THAT SUPPORTS TWO CONCURRENT PROCESSES USING ARM ASSEMBLY, INTEL FPGA MONITOR PROGRAM, AND THE FPGA BOARD DE1-SOC. EACH PROCESS HAS ITS OWN VIRTUAL MEMORY SPACE (ISOLATED FROM EACH OTHER) AND TWO-LEVEL PAGE-TABLES ARE SUPPORTED.

### Network Ad Blocker (Jun-Jul 2019) (Personal Project)

*Raspberry Pi*

A DEVICE THAT WOULD BLOCK ADS ON MY WI-FI NETWORK, BY INSTALLING PI-HOLE ON A RASPBERRY-PI, THEN CHANGING MY ROUTER'S DNS/DHCP SETTINGS AND USING THE PI-HOLE AS THE ONLY DNS SERVER, THEREBY ROUTING THE NETWORK TRAFFIC THROUGH THE RASPBERRY-PI WHICH WILL INTERCEPT AND DENY THE ACCESS TO AD-SERVING DOMAINS, THEREBY PREVENTING ADS FROM BEING DOWNLOADED.

### Catapult Project (2017)

*Arduino, Spreadsheets*

DESIGNED A CATAPULT WHICH MEASURES THE ANGULAR VELOCITY OF THE THROWING ARM TO PREDICT THE PROJECTILE.

## Achievements

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2015

**First rank in International Math Olympiad in School**, Secured first rank in School and was awarded a Gold medal for it.

*International Maths  
Olympiad ( Science  
Olympiad  
Foundation )*

2013

**Second position in Japanese Soroban Maths Nationally**, Secured the second position nationally in the 9th national soroban and mental maths competition.

*Miyajima Institute  
of Soroban  
education, Osaka,  
Japan*