



Bruno Bachmann

Computer Engineering

TECHNICAL SKILLS

Programming Languages

- HTML5 & CSS3
- Javascript
- Java
- C/C++
- C#
- Python
- Ruby
- SQL
- Intel 8052 & x86-64 Assembly
- VHDL
- MATLAB

Development Tools

- Visual Studio
- Eclipse Mars IDE
- XCode
- Unity & Blender
- Processing IDE
- Git
- MultiSim
- Quartus 2
- Command line (UNIX)
- Adobe InDesign

Libraries and Frameworks

- JQuery
- Twitter Bootstrap
- Three.js
- Rails
- WordPress
- OpenGL

ACADEMIC & CO-OP STATUS

Academic Program

- Computer Engineering; 3 academic terms completed
- Anticipated date of graduation: May, 2019

Co-op Status

- Completed 1/5 work terms; available for 4, 8, or 12 months beginning May, 2017

TECHNICAL PROJECTS

Smart Alarm

March-April 2016

Designed and built a smart alarm and backing web application using a Raspberry Pi and an Arduino among many other components with five teammates. Within four weeks the alarm could detect wifi networks, check for existing internet connections, and pair with the user's account on setup. After this the alarm would calculate the appropriate wakeup time based on its location and the user's Google calendar and settings. Upon waking the user up the alarm would listen for user requests about their news, weather, and schedule among others using voice recognition, and read this information back to the user in response.

Autonomous Robot

March 2016

Worked as part of a team of 6 to design and build a fully autonomous robot capable of following dark lines on the ground, avoiding obstacles using an ultrasonic sensor, and moving to specified positions given their coordinates. This project was built from the ground up over the course of three weeks.

Database, Server and Machine Learning

December 2015

Collaborated with a partner to build an in-memory database and server that modeled the Yelp Academic Dataset from the ground up. After two weeks of development the server was able to simultaneously serve hundreds of clients (through a simple command line interface we developed), handle incoming and outgoing queries and data, and make the necessary changes to our database all in a safe manner using multithreading.

Virtual Environment

November 2015

Worked with a partner to fill a virtual world with characters that interacted with one another. By the two-week deadline we had added eleven new objects/characters, each with their own AI and interdependencies that could be manipulated and displayed using the Java Swing API.

WORK EXPERIENCE

UBC Faculty of Education

May, 2016 – September, 2016

Web Developer and Technology Support

- Developed the Scarfe Digital Sandbox in collaboration with another co-op student

Cactus Club Cafe

August, 2015 – September, 2015

Kitchen Partner

- Washed dishes at the Cactus Club Café at English Bay for two weeks before being put on concession cook and food-prep duties for the remainder of my time there
- Worked in small teams of 2-4 people, washing dishes for the entire restaurant

- Read orders and cooked and packaged up to 40 orders per hour at a high speed for up to 9 hours at a time, ensuring that no customer was left waiting over 8 minutes for their food from the time the order was placed to the time it was served

VOLUNTEER WORK EXPERIENCE

National Honor Society

February, 2013 – June, 2014

Member

- Focused on improving the lives of the less fortunate people in the local community
- Activities included, but were not limited to, weekly visits to old age homes, monthly visits to foster care homes and homes for the mentally handicapped, fund raisers, and large charity events for those in the country affected by devastating events such as natural disasters

Habitat for Humanity Foundation

May, 2013 – June, 2014

Member

- Worked as part of a team to overcome financial and communicative barriers for the less fortunate by planning and running fundraisers, as well as acquiring and appropriating resources in order to assist in small scale, non-profit construction jobs in the local community

EDUCATION

University of British Columbia

September, 2014 – December, 2015

Computer Engineering

- Currently a 2nd year computer engineer

National Outdoor Leadership School (NOLS)

September, 2013

Graduate (Patagonia Branch)

- Part of a team of 20 person leadership school on a 7-day trek through Patagonia

International Baccalaureate

June 2014

AWARDS

International Major Entrance Scholarship	2014
Nido Eagle Rays Swim Team Most Valuable Player Award for 2014	2014
Nido Eagle Rays Swim Team Most Valuable Player Award for 2014	2014
Certificate(s) of achievement	2014
For outstanding achievement in IB Physics SL 2, and IB Theory of Knowledge 12	
President's Award for Educational Excellence	2014
International School Nido de Aguilas Scholar Athlete Award	2013
International School Nido de Aguilas Eagle Rays Swim Team Letterman Award	2014

PROFESSIONAL AFFILIATIONS

The Association of Professional Engineers and Geoscientists of British Columbia

ACTIVITIES AND INTERESTS

Sports

- Ultimate Frisbee
- Bodyboarding/ surfing

Music

- Music production with FL Studio
- Playing the guitar
- Game development

Technology

- Game development
- Character modelling
- Animations