DAVID HERRERA

3455 Rue Aylmer Apt. 309 ⋄ Montreal, QC H2X-2B5
davidfherrerar@gmail.com ⋄ cell: (514) 641 9404

OBJECTIVE

Seeking a computer science internship that can utilize my skills, ability and knowledge to provide me with an opportunity for professional growth and satisfaction.

EDUCATION

McGill University, Montreal, Quebec September 2010 - Expected May 2015

· Bachelor of Science, Computer Science & Physics

SKILLS

Languages:

· Fluent in English and Spanish with excellent writing skills.

Technical:

Operating Systems:	Unix, Windows
Programming Languages:	C, C++, Objective-C, Java, Standard ML, MatLab, Python, Shell Scripting.
Web Design:	HTML5, CSS, CGI, JQuery, JavaScript.

WORK EXPERIENCE & RESEARCH

Computer Specialist/Sales May 2011 - August 2011
Independent, Calgary, Alberta

· Installing operating systems in Mac and PC machines.
· Repaired software related problems of Mac and PC computers.
· Migrated user data from old computers to new computers.
· Met costumers, presented product, and completed transactions of the product.

Research Assistant December 2014 - Present
Paul Fracois Biophysics Lab, Mcgill University

· Currently creating simulations in python for a new software that recreates the adapting sorting theory to explain T-cell binding in cells.

Research Assistant May 2014 - December 2014
Paul Wiseman Fluorescence Microscopy Lab, Mcgill University

· Conducted simulations to test and improve a new software called dSpida written in MATLAB. The software finds a relationship between the speed and the number of particles in a cluster inside a cell tagged with a fluorescent label.
· Created simulations for diffusion in 3D of particles in fluorescent images.
· Used the software to successfully characterize a mGLu3 receptor in cells tagged with fluorescent labels.

PROJECTS

IPhone Applications May 2014 - August 2014

- Coded a card matching game with excellent synchronization, creating a well protected model from the view controller.
- Coded a postfix notation calculator app. to perform basic arithmetic as a personal project.

Thermistor Properties - Arduino Uno Project January 2014 - April 2014

- Designed the experimental set up and procedure to obtain the different properties that characterize a thermistor.
- Acquired data, and provided input using the Arduino Uno, through C language.
- Analyzed data and fitted appropiate models through MATLAB.

RELEVANT COURSEWORK

Comp 310, **Operating Systems**:

- Resource allocation, dispatching, processors, access methods, job control languages, main storage management. Batch processing, multiprogramming, multiprocessing, time sharing.

Comp 360, **Algorithm Design**:

- Heaps,red/black trees, network flows, greedy algorithms, dynamic programming, divide and conquer, randomized algorithms, linear Programming, NP-reductions, approximations algorithms

Comp 462, **Computational Methods in Biology**:

- Models of evolution, sequence comparison, phylogenetics, gene expression and regulation, DNA sequencing, Protein structure.

Comp 330, **Theory of Computation**:

- Mathematical models of computers, finite automata, Turing machines, counter machines, push-down machines, computational complexity

Comp 302, **Language Paradigms**:

- Programming language design issues, binding and scoping, parameter passing, lambda abstraction, data abstraction, type checking, inheritance, functional and logic programming.

VOLUNTEER & ACTIVITIES

McGill Varsity Soccer Team August 2012 - 2014

- Commitment of 20 hours a week
- Served as a varsity council representative during the 2013/2014 season.

Peer Tutor Students September 2012 - December 2013

- Peer tutored students in the fields of Computer Science, Physics and Math.

Volunteer McGill Society of Physics Students September 2011 - April 2012

- Met with students and helped them review for exams, and assignments.
- Organized events and activities for the faculty to raise funds to improve the faculty facilities.