LISA DESPO

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EDUCATION

Bachelor of Engineering (Electrical) **Sep 08 - Present**
McGill University, Montreal, QC

- Edgar R. Parkins Scholarship, McGill University
- Finalist, Embedded Systems category, Microsoft ImagineCup Competition (2010)
- 1st Place, ECSE 211 Robotics Competition, McGill University (2009)

Diploma of Collegial Studies (Health Sciences) **Sep 06 - Jun 08**
Marianopolis College, Montreal, QC

LANGUAGES

English (native language), French (fluent written, functional oral)

TECHNICAL SKILLS

Programming Languages: Java, C, C++, MIPS assembly
IDEs: Visual Studio, Eclipse, Netbeans, CodeBlocks
Numerical Software: LabView, MATLAB, Mathematica
Simulation Tools: SIMULINK, SPICE, NI MAX, LogicWorks
Publishing Software: Adobe InDesign, CorelDraw, MS Office

ENGINEERING EXPERIENCE

Research Student **May 10 - Present**
Multimedia Signal Processing Lab, McGill University, Montreal, QC

- Implement signal processing and system control algorithms using LabView
- Mastered the use of a National Instruments' DAQ board to test and trouble-shoot designed circuits and faulty devices; converted the DAQ board to a synthesizer/keyboard
- Developed an audio program that converts the sound card into an oscilloscope, then uses the input signal from the microphone port to modulate the frequency and amplitude of a generated output wave
- Designed two peripheral devices for the aforementioned program: one senses water ripples, another generates voltage spikes using a magnetic marble
- Re-used electronic components and motors from out-dated devices to construct a wind-powered USB charger

Research Student **Jul 09 - Sep 09**
Mobile Robotics and Computer Vision Lab, University of Western Ontario, London, ON

- Tested and analyzed hardware and software components of a biped robot
- Coded numerical analysis programs in C
- Developed control algorithms for motors in MATLAB & SIMULINK
- Designed electronic circuits and used various lab equipment, such as oscilloscopes and multi-meters, to trouble-shoot

PROJECTS

Design of a Light-Seeker **Sep 10 - Present**

- Built a sensor using photo-resistors to determine whether a light source is to the right or to the left
- Implemented a discrete H-bridge that turns a DC motor towards the light source
- Currently researching a method to ramp the motor's acceleration to create a critically damped system

Microsoft ImagineCup Competition 2010 **Jan 10 – Jul 10**

Montreal, Canada and Warsaw, Poland

Finalist in the Embedded Systems category

- Developed a simplistic user-interface for a greenhouse for a third-world country
- Worked with Visual Studio in C# to create a program for an automated greenhouse embedded system

Design of an Autonomous Search-and-Recover Robot **Sep 09 - Dec 09**

Placed 1st in the design competition

- Prepared both hardware and software subsystems for system integration
- Programmed in Java using Eclipse IDE
- Optimized algorithm efficiency for real-time performance on an embedded system
- Coordinated with teammates to organize project logistics such as time, budget, resources, and individual capabilities

GENERAL EXPERIENCE

Circulation Staff **Sep 09 - May 10**

Schulich Library of Science & Engineering, McGill University, Montreal, QC

- Staffed the Loans/Reserves desk at Schulich Library during evenings & weekends
- Provided rapid and friendly customer service to students & faculty
- Responsibilities included shelving books, and documentation & data entry using ALEPH library management software

English Teacher **Sep 08 - Jul 09**

First English (after-school program), Montreal, QC

- Encouraged students to communicate comfortably in English by organizing creative and energetic learning activities
- Demonstrated management skills by taking charge of a dynamic work environment like a classroom

Founding President & Coach **Aug 07 - May 08**

Marianopolis Swim Club, Montreal, QC

- Created a student club at Marianopolis College for competitive swimmers
- Planned and supervised three fundraisers and four friendly competitions
- Improved leadership and communication skills through coaching