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Jean-Sébastien Déry

Education

2010–2015 **B. Eng. Computer Engineering**, *McGill University*, Montréal, QC, Canada.

courses: Artificial Intelligence, Algorithms and Data Structures, Operating Systems

2008–2010 **D.C.S. Computer Science & Mathematics**, *CEGEP de Saint-Jérôme*, Saint-Jérôme, QC, Canada.

awards: Student Merit Bursary of CEGEP de Saint-Jérôme

Experience

Fall 2014 **Software Engineer Intern**, *Amazon.com*, Seattle, WA.

- Automated the data collection of a new observation used to generate recommendations
- Added the new observation to the e-book suggestion algorithms
- Improved 25% of all e-book recommendations on Amazon.com and Kindle devices

Summer 2014 **Software Developer Intern**, *Ericsson*, Montréal, QC.

- Setup a framework in Java to allow the automation of a SIP stack's system tests
- Programmed a resource monitoring system in Java used to monitor servers
- Improved a Java wrapper for a SIP traffic generator to augment modularity
- Programmed test cases in Java based on specifications to increase testing efficiency

2010–2013 **Infantryman Corporal (Reservist)**, *Canadian Armed Forces*, Montréal, QC.

- Second-in-Command of my section composed of 8 men
- Learned how to operate and focus on the mission in stressful situations
- Acquired rigid self-discipline and strong determination to achieve the mission

Winter–Summer 2013 **Software Developer Intern**, *Ericsson*, Montréal, QC.

- Implemented a storage solution for incoming SMS and MMS in Java
- Enriched an IMAP testing framework by adding new supported commands
- Migrated regression suites from a Java testing framework to a TTCN platform

Technical Experience

Proficient With

Java, Unix, OOP, Agile, UML, CI, TDD

Have Experience With

C/C++, Python, Git, ROS, Maven, OpenCV, Spring

Design Projects

2013–2014 **Software Engineering Leader**, *McGill Robotics: Autonomous Underwater Vehicle*.

- Lead 35 people from the Software Division to build an autonomous submarine
- Ranked 10th out of 39 international teams at the RoboSub 2014 competition
- Taught and made sure the Agile methodologies were followed by the 5 different sections throughout the process
- Worked on a technical section to implement the computer vision with OpenCV in C++
- Wrote feature detection as well as distance estimation algorithms in C++
- Designed and implemented the software architecture with the Robot Operating System

2012–2013 **Motor Team Leader**, *McGill LunarEx: Autonomous Lunar Rover*.

- Responsible of the selection and assembly of 8 motors and motor-controllers for the rover
- Ranked 12th out of 50 international teams at the NASA Lunabotics Mining competition
- Managed a budget of ∼$5K for the motor equipment out of a total budget of ∼$20K
- Created a custom Arduino shield with 3 teammates that featured low-pass filters to convert PWM signals to analog - to interface with the 8 motor-controllers

Academic Projects

Winter 2014 **Halma board game AI**, *An artificially intelligent agent for the Halma board game*.

- Designed an algorithm based on Iterative Deepening A* which allowed an agent to define a set of actions that increased the probability of winning
- Engineered a heuristic that allowed completion of the game and optimal results
- Implemented the solution in Java by having a well-defined object-oriented architecture

Winter 2014 **Messaging System**, *A back-end and front-end implementation of a custom messaging protocol*.

- Implemented the front-end of a custom messaging protocol that supported file transfer
- Enabled secure transactions by having the connection on an encrypted layer using SSL
- Designed and programmed a finite state machine to support the various actions while staying modular

Fall 2013 **Robotic hand**, *A wireless master/slave robotic hand control solution*.

- Programmed the drivers used to control the servo motors and LCD display
- Defined a finite state machine architecture to handle the different possible actions
- Implemented a solution that used the accelerometer present on the board to control the Pitch and Roll angles of the hand

Summer 2013 **BB Sentry Turret**, *A BB Sentry Turret for the BuildSomething Hackaton*.

- Programmed the back-end in Python on a Raspberry Pi with 3 other teammates
- Successfully built and programmed the turret in less than 10 hours
- Wrote a PS3 interface that allowed direct control of the turret
- Designed an architecture that allowed the team of 5 to work in parallel with an easy integration at the end of the hackathon