

Jean Nassar | Résumé

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masasin • masasin • Engineer in Training

Interests: Automation, robotics, AI, astronomy, anatomy, astrodynamics, space

Education

Candidate, MS Mechanical Engineering Science **2014–Present**
Kyoto University, Mechatronics Laboratory *Kyoto, Japan*

- Researching a third-person view for teleoperated drones using ROS and OpenGL
- Assisting labmates with programming (including swarm robotics)
- Was software lead for the lab's teleoperation robot; participated in RoboCup Japan

Research student **2013–2014**
Kyoto University, Mechatronics Laboratory *Kyoto, Japan*

BASc, Honours Mechatronics Engineering **2008–2013**
University of Waterloo *Waterloo, ON*

- Final project was a portable water purification system
- Automated an assembly line robot (Allen-Bradley PLCs)
- Built an autonomous boat using Arduino
- Cofounder of Engineering Ambassador program
- Director of the Mental Health Awareness directorship
- Secretary of Club for Undergraduate Bioengineers; organized international symposium

Languages

Fluent: English, French, Lebanese, Japanese

Intermediate: Spanish, Arabic

Beginner: German, Mandarin, Russian, Krio

Technical skills

- Python (incl. SciPy stack), C++, C, ROS, Matlab, gnuplot, \LaTeX
- Linux (Arch, Fedora, Ubuntu), Microsoft Windows (XP to 10)
- Raspberry Pi, Arduino, mbed, AVR, Allen Bradley PLC
- Solidworks, Autodesk Inventor, AutoCAD, Sketchup
- Vim, Git, Gimp, Inkscape, LibreOffice, Microsoft Office

Selected courses

- Modern control theory
- Automatic control systems
- Electromechanical machine design
- Computer structures and RT systems
- Digital control applications
- Microproc. systems and interfacing
- Mechatronic system integration
- Algorithms and data structures

Co-op experience

Starquip Integrated Systems, Ltd

Junior Engineer

Spring 2012

Toronto, ON

- Assisted in the mechanical design of custom pneumatic lift-assist devices
- Created modular assemblies and circuits
- Reduced design time for new systems
- Converted 2D drawings to 3D assemblies
- Produced ASME-compliant drawings

Kevin Quan Studios, Ltd

Junior Project Engineer

Fall 2011

Toronto, ON

- Completed basic and intermediate Solidworks instruction
- Created assemblies and drawings of mountain and racing bicycles
- Wrote airfoil generator and exporter using LibreOffice Calc, Python
- Performed 2D and 3D Computational Fluid Dynamics analysis of airfoils and bicycles
- Determined the optimum configuration for several racing bicycles
- Designed tooling molds and parts for various bicycle components

Intelligent Mechatronics Systems, Inc

Hardware Associate

Winter 2011

Waterloo, ON

- Prototyped hardware solutions for future products using Altium Designer
- Programmed microcontrollers using C and C++
- Provided general assistance to lead design engineers

University of Waterloo

Research Assistant, Multiscale Additive Manufacturing Lab

Spring 2010

Waterloo, ON

- Designed, procured, and built essential parts for the enclosure, printhead assembly, and environmental isolation system for a solid freeform fabrication workstation
- Workstation produces 3D scaffolds for bone and cartilage regrowth
- Performed image processing on electron micrographs using Octave

American University of Beirut

Research Assistant, Computer Vision and Mobile Robotics Lab

Fall 2009

Beirut, Lebanon

- Researched and developed a positional navigation system for robots using C++
- Quantized Inertial Measurement Unit (IMU) error

Sierra Construction Systems, Ltd

Engineer in Training

Winter 2009

Freetown, Sierra Leone

- Computerized payroll and significantly saved time and resources using Microsoft Excel, Word, and VBA programming
- Payroll productivity increased by approximately 6000%
- Performed cost and time estimation for various construction projects

Certifications

- CPR HCP, 2012