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LOUIS LEBLANC

Education

- present **Embedded Systems Engineering Certificate**, *University of California, Irvine, Online Extension*, Irvine, California.
- 2013 **BASc in Mechanical Engineering**, *University of Ottawa*, Ottawa.

Experience

- 2015-present **Mechanical Designer**, *Dynamo Playgrounds*, Rockland, Canada.
Mechanical Design, Manufacturing Support, Industrial Design.
- Involved from initial design vision to engineering and finally supporting manufacturing.
 - Developed a new rope net design process. Reducing design time by 50% while increasing reliability by combining tensile structure theory with empirical data.
 - Technical supervision and support in the production of 100m length bent pipe play sculptures. Developed a Python script to interpret complex CAD data into measurements usable by production crew.
- 2014-2015 **Freelance Consultant**, *Prototype D*, Ottawa, Canada.
Industrial, mechanical design and embedded systems in the development of new products.
- Conceived a novel automated 3D mapping surveying system. Formulated the system's architecture and ultimately fabricated a hardware and software proof of concept using 3D printing and the Arduino platform.
 - Validated the structural integrity of a home cladding system through FEA validated by physical testing.
- 2011-2013 **Research Assistant**, *University of Ottawa & Atomic Energy Canada*, Ottawa, Canada.
Research project in the dynamics of the deflagration of hydrogen mixtures in air. This research was done by blowing soap bubbles filled with a hydrogen-air mixture onto a flat surface and filming their combustion with a high speed camera.
- Development of a technique, apparatus and soapy solution to reliably blow 45cm (18in) soap bubbles.
 - Publications from this research was awarded the American Physics Society's 2013 Milton van Dyke award for a video of fluid motion and was featured on Discovery's Daily Planet.

Languages

Fluent in reading, writing, and oral in both French and English.

Skills

Programming	C, Python, MatLab	Web	Basic HTML 5 and CSS
Electronics	Arduino, Atmel AVR	CAD	Rhino/Grasshopper SolidWorks, Ansys FEA
Office	MS Word, Excel, Powerpoint, L ^A T _E X, Adobe Photoshop	Hands-On	Machine Shop Training, MIG Welding, 3D printing