

# WILL BEATTIE

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*A motivated and energetic mechanical engineer seeking a design role in a growing technology company*

## EXPERIENCE:

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Mechatronics Designer @ Medavail, Mississauga ON Sept 2015 – present  
*MedAvail develops robotic systems for self-service dispensing of prescription medication*

- Designed and validated electromechanical assemblies for autonomous pharmaceutical dispensing machines, including sensor and actuator specifications
- Devised and conducted proof-of-concept experiments to de-risk critical design elements
- Created a new package identification module, reducing cost by 20% and cycle time by 30%
- Conducted the prototype build of a new robotic pharmacy design, diagnosing issues, producing remedies and documenting the build process for future contract manufacturer use
- Incorporated design feedback from internal departments, manufacturers, and customers to optimize product for ease of use, manufacturability, costs and time-to-market

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Research Engineer @ Multiscale Design Lab, Vancouver BC Sept 2010 – Dec 2013  
*The MDL applies mechatronic expertise to develop enabling technologies in medicine and biology*

- Designed, prototyped and tested a microfiltration device for separating tumor cells from blood
- Automated the operation, data acquisition and analysis of laboratory experiments using fluidic controls, microcontroller systems and digital image processing
- Produced three first-author publications (*Lab On A Chip* 2014, *μTAS* 2011 and 2013)

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Sessional Lecturer @ UBC, Vancouver BC Sept – Dec 2013

- Instructed MECH 368: Measurement and Instrumentation, a core 3<sup>rd</sup> year undergrad course
- Achieved 4.7/5.0 on overall quality based on a student survey, 5.0/5.0 on [ratemyprofessors.com](http://ratemyprofessors.com)
- Lectured 95 undergraduates covering sensors, signal processing, and readout using event-driven programming

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Crew Boss @ Outland Reforestation, Timmins ON Summer 2010

- Led the hiring and day-to-day operations of a 16-person tree planting team
  - Managed a \$500k reforestation project in remote worksites, meeting production and quality targets
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**TECHNICAL SKILLS:**

Design: Sheet metal, conventional machining, weldments, injection molding, RP  
CAD: *Solidworks (with PDM), Autodesk Inventor*  
Simulation: *Solidworks Simulation Suite, COMSOL Multiphysics, Fluent*  
Programming: Comfortable writing scripts and helper programs in *Python, .NET*, and *C* for microcontroller applications (*MSP, Arduino*)  
Communication: Strong technical writing and presentation skills

**EDUCATION:**

- M.A.Sc., Mechanical Engineering, UBC, 2013
- B.Sc.E., Engineering Physics, Mechanical Option (1<sup>st</sup> Class Honours), Queen's University, 2010

**OTHER:**

- Designed and constructed a low-cost petrology microscope for analysis of geological samples
- Designs and constructs hobby robot systems
- Active member of site3 Colaboratory, a community run makerspace in Toronto. Projects include skateboards, art, and simple furniture
- Traveled 2014-2015, hiking in Nepal and mountaineering in British Columbia
- Completed the second known ascent of the Wahoo Tower, a mountain located three days of bushwhacking northwest of Lillooet BC