Josh Bradshaw

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Experience

2015–2016 **Research Engineer in Medical Imaging**, *SickKids Hospital*, Toronto.

- Developed a system for synchronizing MRI acquisition with cardiac motion, using surgically implanted arterial pressure probes. The system facilitated a series of animal experiments involving cardiac and lung imaging.
- Created a software application that enabled radiologists to perform customized data analysis during MRI clinical trials.
- Built a digital filtering module for Doppler ultrasound probes to troubleshoot problems encountered during an ultrasound clinical trial.
- Built calibration and testing devices for MRI acquisitions, such as flow phantoms.

2015–2016 **EEG Analysis Software Developer**, *University of Waterloo*.

- Developed an EEG analysis interface that has been used in two published studies. Interface is open-source and live at crowdEEG.ca.
- Investigated the extent to which neurologists agree with one another about ambiguous EEG feature identifications.

2013–2014 **Automation Engineer**, *Watrhub*.

- Developed and deployed a customized internal system to help research analysts find important documents regarding wastewater treatment systems of major cities.
- Developed web crawlers to populate the internal system's database.
- Implemented a machine learning classification system to categorize and sort documents collected for the database.

2012–2013 **Test Automation Engineer**, *Watrhub*.

- Developed tools in python to automate the performance testing of cibc.ca
- Saved test analysts 20 minutes per test by creating a tool that automatically populated the internal performance testing report.

Education

2012–2017 **Bachelor of Applied Science**, *University of Waterloo*.

Relevant courses include: Biomedical Measurement and Signal Processing, Optimization and Numerical Methods, Algorithm Design and Analysis, Image Processing, Control Systems and Simulating Neurobiological Systems

Projects

2016–2017 **Skeleprint**, *University of Waterloo*.

- Created a novel 3D printing process for bone graft production.
- Process involved printing with a biocompatible putty.
- Printed onto a rotating mandrel using high pressure pneumatic extrusion and cured in place with UV lasers.
- Final prototype was purchased by a biomaterials lab and is currently in use for bone graft prototyping.

2016 **MRI Compatible Blood Pressure Probe Amplifier**, *University of Waterloo*.
- Created a $200 replacement for a $13,500 MRI compatible blood pressure probe amplifier.
- SickKids Hospital purchased five of my instruments.
- These instruments were used in animal studies that have been submitted for publication.

2016 **SMRT WATR Interactive Fountain**, *University of Waterloo*.
- Designed and built a robotic water fountain that was connected to an online quiz game.
- The fountain had five water jets with two axis of motion and 200 ultra-bright LED pixels that displayed animations.

2013 **Ski-Bracing Device for Children with Developmental Disabilities**.
- Worked closely with the Canadian Association for Disabled Skiing to resolve a problem they were having with their equipment.
- Revised a widely used ski-bracing device to make the installation and removal process easier, while improving ski-retention and safety.

Awards and Grants

2017 **Baylis Medical Capstone Design Award**.
Large monetary prize granted in recognition of the Skeleprint design project's success

2017 **Engineer of the Future Trust**, *University of Waterloo*.
$4500 in project funding that paid for the materials used in the Skeleprint project.

2016 **Third Year Design Symposium Winner**, *uWaterloo Systems Design Eng. Dept*.
Granted in recognition of the MRI compatible blood pressure probe project.

2015 **Undergraduate Research Award**, *University of Waterloo*.
Granted in recognition of research accomplishments at SickKids.

2015 **Second Year Design Symposium Winner**, *University of Waterloo*.
Granted in recognition of the SMRT WATR Interactive Fountain.

2014 **Engineering Co-op Student of the Year**, *University of Waterloo*.
Only first year student ever to win. Granted in recognition of achievements at Watrhub Inc.

2013 **Impact Award**, *CIBC*.
Won a monetary prize as a co-op student that's usually reserved for full time staff. Award granted in recognition of for improvements made to the performance testing process.

2012 **Community Involvement Award**, *Professional Engineers of Ontario*.

Hobbies

I build software applications, scientific instruments and electronic art in my free time.

I'm an ultra-long distance hiker, and I hiked the Pacific Crest Trail in 2017.

I run my local communities slackline club, which currently has 40 active members.

I've played the saxophone in a few bands.

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Company Recruitment team
Company, Inc.
123 somestreet
some city

January 01, 1984

Dear Sir or Madam,

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis ullamcorper neque sit amet lectus facilisis sed luctus nisl iaculis. Vivamus at neque arcu, sed tempor quam. Curabitur pharetra tincidunt tincidunt. Morbi volutpat feugiat mauris, quis tempor neque vehicula volutpat. Duis tristique justo vel massa fermentum accumsan. Mauris ante elit, feugiat vestibulum tempor eget, eleifend ac ipsum. Donec scelerisque lobortis ipsum eu vestibulum. Pellentesque vel massa at felis accumsan rhoncus.

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Albert Einstein discovered that $e = mc^2$ in 1905.

$$e = \lim_{n \to \infty} \left(1 + \frac{1}{n}\right)^n$$

Yours faithfully,

Josh Bradshaw

Attached: curriculum vitæ