

Ben Willetts

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Education

McGill University | *Montréal, Canada* **September 2014 - Present**
• Bachelor of Software Engineering
• Undergraduate degree expected in June 2019
• Teaching Assistant for COMP302: Programming Languages and Paradigms in Fall 2018
Canadian International School of Hong Kong | *Hong Kong SAR* **August 2001 - May 2014**
• International Baccalaureate Diploma - OSSD Diploma

Work Experience

McGill Clinical & Health Informatics | *Software Developer Intern* | mchi.mcgill.ca **May 2018 - Present**
• Developed interactive data-driven features with JavaScript for a health informatics web application *Montréal, Canada*
• Led the creation of an API to facilitate external server queries for R developers and scientists
• Involved in a Scrum management system for agile development; making efficient use of JIRA software
• Collaborated with leading researchers in Epidemiology and Biostatistics to fine-tune software requirements
Gammon Construction Limited | *Information Management Services Intern* **May 2017 - August 2017**
• Designed an enterprise application to support intercompany workflow and transactions *Hong Kong SAR*
• Created modern dynamic user interfaces with Angular JS, back-end API with Spring and Hibernate
• Communicated application requirements with E&M engineering experts to sustain feature driven programming
• Experienced an enterprise development format, managing changes through Apache Subversion
TOM Condos | *Data Management Administrator* | *Summer Intern* | *Part-time* **May 2016 - April 2017**
• Managed and maintained client data for a luxury condo development *Montréal, Canada*
• Updated and organized back-end of the company website
• Created Excel templates to better manage client data and use for showroom presentations
• Proposed and implemented online advertising solutions for real estate developments

Other Relevant Experience

UCSF-McGill-PeriGen Research Project | *Project Member* | *Advisor: Prof. Robert E. Kearney* **January 2018 - Present**
Software prediction algorithm to determine the likelihood of HIE in fetuses *Montréal, Canada*
• Developed a database management system linking clinical and fetal monitoring data
• Analyzed fetal monitoring (EFM) signals to identify features that are predictive of HIE
• Combined clinical and EFM data using machine learning methods to develop a perinatal HIE predictor
• Completed a grant proposal with predictive results to submit to National Institutes of Health (NIH)
• Worked together with industry experts under the supervision of McGill's Biomedical Engineering department
CodeJam: Data Dive | *Hackathon Winner of Overall First Place Prize* | *Devpost: [bit.ly/walksafenyc](https://devpost.com/software/walksafenyc)* **November 2017**
Web mapping application that provides safest route to destination *Montréal, Canada*
• Preprocessed NYC vehicle accident data into an incident frequency heat map using k-means clustering
• Built server-side route suggestion engine via unsupervised machine learning and Google Maps API
• Implemented various software features to enhance functionality, usability, and user experience
• Presented our software demo to Amazon software engineers, competing with over eighty student teams

Languages & Technical Skills

English: Fluent written and spoken | **Mandarin:** Adequate written and spoken

Programming Languages

- Java, Python, C
- HTML/CSS, JavaScript
- OCaml, PHP, SQL
- UNIX Shell Scripting

Software Tools

- AngularJS, React, Vue.js
- Hibernate, Flask, Node.js
- sklearn, TensorFlow, Keras
- PyTorch, Jupyter, cv2, Git, JIRA

Relevant Knowledge

- Full Stack Web Development
- Agile Methodologies
- Deep Learning
- Applied Machine Learning

Dedicated Hobbies

- Varsity Basketball and Volleyball, Club Golfer
- Long distance running/hiking charity events
- Music production, Classical piano