

Michelle Watson

Biomedical Engineering Candidate

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LANGUAGES

- Java
 - Google Web Toolkit
- C#/C++
- Python
 - Matplotlib
 - Pandas
 - Numpy
- Swift
 - XCTest
 - Firebase
- Octave/MATLAB
- Shell / Batch
- SQL
- LaTeX

SKILLS

- Git / Subversion
- Jenkins
- Image/Data Processing
- Quality Assurance
- Azure

COURSES

- Data Structures and Algorithms (C++)
- Digital Computation (C#)
- Human Factors in Biomedical Design

CLUBS

Engineering Ambassadors:
Recruitment and Events Lead
UWaterloo Data Science
UW BioMechatronics

EDUCATION

UNIVERSITY OF WATERLOO
CANDIDATE FOR BASC
BIOMEDICAL ENGINEERING
September 2018 - Present

SUMMARY OF QUALIFICATIONS

- Strong analytical skills evident from **enhancing image processing algorithms**
- In-depth knowledge of **OOP** and **dynamic memory management**
- **Initiative** exhibited by introducing novel **test coverage** system at WorkMarket
- Strong work ethic and collaboration skills evident by **Agile Sprints** on multiple small teams for SaaS company

EXPERIENCE

SOFTWARE DEVELOPER | ELEKTA

Jan 2020 – May 2020 | Toronto, ON

- Developed **image processing** algorithms of **DICOM** images for radiotherapy QA
- Enhanced **edge detection** and **ROI** algorithms
- Automated build with **CI/CD** pipeline to be less error-prone and **85%** faster
- Setup emulator VMs for **automated** linac and software integration testing
- Automated monitoring system using **Azure budgets API**, **Postman** and **PowerShell** for strategic marketing to demo users
- Redesigned linac QA tests due to FMECA inspired analysis

QUALITY ENGINEER | WORKMARKET (ADP CANADA CO)

May 2019 – Aug 2019 | Toronto, ON

- Automated **iOS mock tests**; increasing automatic test coverage by **20%**
- Enhanced **TestRail** and **XCode** documentation to shorten onboarding time and **improve automation** practices with improved readability
- Wrote and executed **test cases** and test plans for new features
- **Led mobile design team meetings**, bridging the gap between dev and designer
- Version controlled with **Git**; created extensive **documentation**

PROJECTS

VISUAL TESTING | WORKMARKET (ADP CANADA CO) HACKATHON

May 2019 – Aug 2019 | Toronto, ON

- Used **CocoaPods** and **visual AI** tools to compensate for XCTest limitations
- Conducted **data augmentation** on visual **AI** tools for effective bug detection

HAPTIC GAIT RE-TRAINING | UW BIOMECHATRONICS CLUB

September 2019 – Present | Waterloo, ON

- Utilized **Arduino** sensors to collect and process data
- Performed **biomechanical analysis** to narrow target areas of haptics

GITHUB.COM/MICHELLE-WATSON

Classification of Materials Based on Mechanical Properties (current)

- Data pre-processing and **visualization** using **Pandas & Numpy**

AWARDS

- 2018 University of Waterloo President's Scholarship of Distinction
- 2018 Governor General's Academic Medal