JEREMY PHY

Mechatronics Engineering Student at University of Waterloo

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SKILLS

C++ | Java | Git | HTML | CSS | Linux

Soldering | Power Tools | Electronics Design

CAD | Solidworks

INTERESTS

Skate / Longboarding

Basketball

Cinematography

PROJECTS

Personal Website — jeremyphy.me — Winter 2020

- Created site layout using **HTML** and **CSS** for an intuitive user experience
- Implemented **Bootstrap 4** framework resulting in accessible viewing on both mobile and desktop devices

Robinhood — a Java Arcade Game — Winter 2018

- Designed GUI using **Java Abstract Window Toolkit (AWT)** for seamless **UX** and gameplay
- Developed game architecture using **object-oriented design;** resulting in efficient entity creation and data storage
- Implemented character mapping using **data structures** allowing for flexible entity interaction and movement

EXPERIENCE

Embedded Software Developer — PerkinElmer, Inc. — Spring 2020

- Implemented **control system** for XYZ motion and pump control in the next generation of ICP-mass spectrometers
- Programmed **SPI transfer framework with C**; allowing for 4 daisy-chained devices per connection
- Integrated motor controllers into the existing hardware system, saving up to $500/unit in production costs

Electrical Engineering Intern — Sunnybrook Research Institute — Summer 2018

- Developed Bash script for Linux-based microcontroller, capable of applying a reflow heat profile in under 5 minutes
- Built an **automated** solder reflow oven from existing chassis, capable of a peak internal temperature of 235°C
- Presented successful project results to leading Focused Ultrasound (FUS) researcher Kullervo Hynynen, Ph.D. and audience of 40+ researchers

ACHIEVEMENTS

Merit Award — Merit Bursary Program — 2019

- For 'exceptional community contributors'

Champions, Best Engineered and Most Novel Design Award — 2018

OTU Sumobot Engineering Competition

- Best result out of 58 teams

EDUCATION

Candidate for BASc. - Mechatronics Engineering — 2019–2024 (expected)

University of Waterloo — GPA: 82.96%

- Courses: Digital Computation, Algorithms and Data Structures

Talented Offerings for Programs in the Sciences (TOPS) — 2015–2019

Marc Garneau C.I.