

Douglas Huang

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SKILLS

- Programming ability:
 - **Proficient in:** C/C++, Python
 - **Familiar with:** Java, HTML, CSS, JavaScript, Latex
- Development Tools: Git, Bash/Unix, Android Studio, Eclipse
- Software: AutoCAD, Solidworks, Altium

EDUCATION

2014 – 2019 | **Candidate for Bachelor of Applied Science in Mechatronics Engineering,**
University of Waterloo.

WORK EXPERIENCE

- Jan. 2015 - Present | **Bioinformatics Software Developer,** Agriculture Canada, Ottawa, ON.
- Developed pipeline with Python and Bash shell scripting to process DNA data sets for vital Canadian crop research
 - Implemented parallel processing to increase efficiency by 45%
- Jan. – Sep. 2014 | **Founder and Instructor,** Android Academy for Young Learners, Markham, ON.
- Developed unique curriculum to introduce computer science principles through building mobile apps and hardware applications with Arduino.
 - Instructed over 20 students ages 10-18 in Android app development.
 - Created and maintained website with course registration functionality.

PROJECTS

- Jan. 2015 | **CodePaper,** U of T Hacks, Toronto, ON.
- Created a graphical programming language which interprets user-drawn flow diagrams for functional programming
 - Utilized Python OpenCV computer vision library for image processing and implemented a binary search tree algorithm to identify nodes and edges
 - Developed web application to submit and process photos of diagrams
- Sep. 2014 | **TurnIT Bike Indicator Light System,** Hack the North, Waterloo, ON.
- Engineered a Bluetooth motion-activated bicycle indicator light system using Arduino microcontroller and Pebble smart-watch.
 - Programmed watch accelerometer to detect arm gestures and control corresponding lights connected to Arduino via Bluetooth module.
 - Created a five – segment LED arrow array embedded into a 3-D printed electronics housing designed using Solidworks.
- Oct. 2014 | **Serial Protocol Parser,** Waterloo Hybrid Team, Waterloo, ON.
- Developed engine data parsing software to transform raw data from hybrid race car vehicle control unit into analyzable information.
 - Utilized Arduino microcontroller and IDE to stream pseudo-data from serial for test simulation of engine.