JORDAN HONG

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EDUCATION

BASc, University of Toronto
2nd year Engineering Science
Electrical & Computer Option

York Mills Collegiate Institute

Affiliated Senior High School of National Taiwan Normal University

SKILLS

Programming
Python, C, Java, Javascript, MATLAB, Verilog
Libraries
NumPy, Matplotlib, OpenCV
Embedded Systems
Raspberry Pi, Arduino
Design
HTML, Processing3, Android Studio
Developer tools
Bash, Zsh, Vim, Git
OS
Linux, macOS, Windows
Typesetting
LaTeX, Markdown
Languages
Mandarin Chinese, English

COURSEWORK

ECE/Computer Science
Algorithms & Data Structures
Digital and Computer System
Electric Circuits
Electromagnetism
Physics
Classical Mechanics
Modern Physics
Quantum Physics
Mathematics
Calculus
Differential Equations
Vector Calculus
Linear Algebra

PROJECTS AND DESIGN WORK

Autonomous Car Charger Deliver Robot 2020
- Electrical design: integrated peripherals with the Raspberry Pi. Implemented python to control motors and camera.
- Contributed to high level software programming with OpenCV and image processing to detect charging port.

StayEnglightened, MakeUofT 2020
Developed a IoT-based smart lighting system for student study areas.
- Integrated the peripherals on the Qualcomm DragonBoard 410C with linux-based Debian environment. Implemented serial communication between Python ennvironment and on-board Arduino processor.

Automated Dough Fermentation Tester 2019
- Developed device prototype for dough fermentation tester using computer vision(OpenCV) and image processing.
- Personal contribution entailed embedded system design with Raspberry Pi module.

Android Productivity Application-Finite 2018-2019
- Collaborated with a partner to develop a time-productivity Android application. Personal work entailed backend text and image data storage. (Launched on Google Play store December 2018).

RESEARCH EXPERIENCE

Advanced Composite Characterization Lab 2019
Summer Undergraduate Researcher
Topic: Polyaniline-Nanocellulose-based green films for ammonia sensing applications.
- Developed and optimized chamber and electrical testing environment for monitoring chemoresistance of green semiconductive films.
- Investigated compositions of different nanomateirals to optimize sensing performance of nanocellulose-based films.
- Developed Python script to automate data association and perform analysis.

AWARDS

Faculty of Engineering Dean's Honour List 2018, 2019, 2020
Faculty of Engineering Admission Scholarship 2018
York Mills Collegiate Institute Gold Award 2018
International Olympiad Research, Taiwan 2016
Taipei Mayor Award 2015

EXTRACURRICULARS

University of Toronto Robotics Association 2019
SUMO Design Team Member- Electrical Design
Canadian Chinese Orchestra, Markham 2017
Erhu & Zhonghu
Newcomers Association, York Mills Collegiate Institute 2016-2018
Vice Chair