KHANG NGUYEN

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Work Experience

AutoCAD Engineer, Glad-Clorox Orangeville **Summer 2018**

- Reduced re-occurring purchasing costs by **3%** by designing replacement parts using a 3D-Printer and **AutoCAD Inventor**
- Spearheaded cooling solution for ERIMA Blender resulting in a **5%** drop in temperature and positive feedback from plant workers
- Given role as project manager tasked with working directly with third-party vendors and contractors to install a 20ft fan in multiple locations in the plant

Relevant Projects and Extracurriculars

Word Wall **Summer 2018**

- Designed and manufactured a word display board by programming an Arduino Nano to multiplex 26 LEDs
- Used the onboard ADC to receive analog input from a potentiometer as well as used the I2C protocol to communicate with a LCD as a user interface
- Utilized soldering skills to transfer the design from a breadboard to a permanent perfboard

Python OCR Script **Summer 2018**

- Wrote a **python** script that uses OCR(Optical Character Recognition) to convert images of text to a string
- Created a simple Flask server that can communicate within a home network using a **Raspberry Pi**
- Printed the converted strings by interfacing a thermal printer through serial communication

Heart Rate Sensor **January-May 2018**

- Designed a heart rate data acquisition system in **Embedded C** which samples your heartbeat and sends the data to the PC via serial communication
- Used **MATLAB** to serially communicate with the micro controller and graphically display the heart rate's beats per minute
- Derived the E-Clock speed, Baud Rate and ADC channel in order to extract data properly

Electrical Team Member, McMaster Solar Car Project **September-May 2018**

- Collaborated with a small team to help design and manufacture a battery protection system which manages over-discharge and overheating using an Arduino and relay
- Developed **time management** skills by multitasking in a deadline-oriented environment

McMaster Delta Hacks 3 **January 2017**

- Collaborated with a team of four to create a meditation app utilizing a MUSE headset and a node.js web server within a 36 hour time frame
- Teamwork and communication skills developed by working with others within competitive environment

Education

Bachelor of Engineering, Computer (Co-Op) **Expected Completion 2020**
McMaster University, Hamilton ON

- Relevant Courses: Digital System Design, Data Structures and Algorithms, Microprocessors

Skills

Hardware
Verilog
PCB Design
Assembly
Quartus
Soldering
Arduino
Rasberry Pi

Languages
Python
C/Embedded
Java
HTML5
CSS3

Software
MATLAB
Pspice
Linux
AutoCad

Tools
Git
Bootstrap
Flask

Interests

Arduino
Electronics
Rasberry Pi
Traveling
Music
Electric-Vehicles
Hackathons