KYLE JOSLING

kylejosling@gmail.com 000-000-0000 kylejosling.me github.com/kylejosling

WORK EXPERIENCE

FPGA Engineering Intern | Christie Digital **May 2018 – Present**

- Developed parts of high speed image processing systems capable of processing 1.2 billion pixels every second
- Progressed through complete FPGA design flow for large complex designs including architecture, RTL coding, simulation and synthesis
- Saved 8 hours of verification time per board by automating built-in self-tests for DDR SDRAM
- Created elegant and well-documented designs by creating block specifications and architecture diagrams
- Completed board bring ups – debugged hardware and solved issues by collaborating with electrical and software engineers and by using oscilloscope and Xilinx Chipscope methods to produce fully functioning hardware
- Worked on a wide variety of Xilinx FPGAs from Spartan 6 to Kintex Ultrascale

Software Developer Intern (Infrastructure) | London Hydro **May 2017 – September 2017**

- Worked on a pilot project that aims to shift residential energy consumption patterns to off-peak times by implementing home automation systems and mobile applications
- Contributed to development of a back-end system using AWS API Gateway, Lambda and DynamoDB to process real-time energy data for analytics and customer use
- Decreased system latency from 50 seconds to just 10 seconds by writing test scripts in Python and optimizing the system
- Acted as communications lead with hardware supplier

Project Management Intern| TF Warren Group – Blastech **June 2016 – September 2016**

- Tracked projects through completion for Canada's largest industrial coating applicator
- Maintained a database of projects, updated customers on project status
- Calculated surface area and paint required for coatings from engineering drawings

RELEVANT EXPERIENCE

Object Tracking Quadcopter | Personal Project **June 2017 – Present**

- Designed and built an autonomous quadcopter from scratch using a combination of off-the-shelf components and 3D printed parts designed on SolidWorks
- Tracks and follows an object by using a microcontroller as a flight controller and a Raspberry Pi for image processing

Western Engineering Robotic Design and Engineering Club **September 2017 – July 2018**

- Developed GPU-optimized computer vision algorithms as part of autonomous racecar team
- Designed embedded software architecture using ROS and implemented design on an Nvidia Jetson

Signtellect | Winner at Hack Western 4 **November 2017**

- Used machine learning and a Leap Motion Controller to develop a web application that teaches users sign language

EDUCATION

B. Eng. Sc. Mechatronic Systems Engineering | University of Western Ontario **Expected 2020**

- Deans Honour List – 3.90/4.00 GPA
- Relevant coursework: Microcontrollers and Microcomputers, Circuits and Systems, Digital Logic Systems, Mechatronic Design, Sensors and Actuators

SKILLS

Software

C/C++, Python, TCL, Assembly, Vim, OpenCV, ROS

Hardware

Verilog, Xilinx Vivado Design Suite, Synopsys VCS, SolidWorks (CSWA certified), Autodesk EAGLE, soldering, oscilloscopes