

Krisztian Kurucz

3B Mechatronics Engineering

Contact

PERMANENT

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Languages

English

Hungarian

Programming

Java, C#, C++

Python 2.7 & 3

HTML & CSS

JavaScript, Node.js

PHP & SQL

VHDL & Verilog

PLC Programming

Embedded C

MATLAB

Assembly

Hardware

Xilinx & Altera FPGAs

Arduino

BeagleBone

Raspberry Pi

ARM Cortex

PIC

Education

Candidate for Bachelor of Applied Science (BASC) in Mechatronics Engineering

University of Waterloo, Waterloo, ON

Expected 2018

- Achieved a competitive rank of 21st of 132 students during the 3A term, maintaining a cumulative average of 85.1%
- Relevant Courses:** Algorithms and Data Structures, Intro to Microprocessors and Digital Logic, Computer Structures and Real-Time Systems, Sensors and Instrumentation, Microprocessor Systems and Interfacing, and Actuators and Power Electronics

Ontario Secondary School Diploma (OSSD)

King City Secondary School, King City, ON

2013

Experience

ARISTA NETWORKS INC

Santa Clara, California

Hardware Engineering Intern

September 2016 - December 2016

- Drove development of Integrated Power Shelf (IPS) internal project, heavily contributing to the hardware and software design of the 1RU BeagleBone-controlled power system
- Expanded and prototyped the software platform for the IPS, adding SNMP functionality, Flask web interface, and software telemetry capabilities
- Conducted a comprehensive hardware evaluation of a new digital power management IC, testing functionality and ensuring compatibility with new designs, and culminating in a formal report
- Assisted with various schematic design and prototyping tasks as needed

IMAGINE COMMUNICATIONS

Toronto, Ontario

Hardware Designer

January 2016 - April 2016

- Assisted with VHDL design and simulation for Xilinx-based FPGAs centered around real-time audio and video processing
- Revised and updated electrical schematics with Cadence EDA tools to replace an IC on an existing production board, then tested and verified the successful redesign
- Analyzed and debugged a defective board through examining the schematic, conducting electrical measurements through an oscilloscope and multimeter, and logical circuit troubleshooting
- Conducted SFP+ compliance testing to ensure signal integrity on pre-production boards, as well as wrote the associated formal compliance reports

KEPSTRUM INC

Vaughan, Ontario

Junior Engineering Intern

May 2015 - August 2015

- Led development of a major Windows application in C#, meant to facilitate internal engineering processes, and completed a working prototype in less than two months
- Contributed to software and PLC test stand HMI development on-site at Kepstrum's technical facilities in Austria
- Initiated changes to existing business practices through the introduction of a formal revision control system as well as a centralized knowledge-base for the company

BLACKBERRY LTD

Waterloo, Ontario

Software Systems Analyst

September 2014 - December 2014

- Administrated and supported employees on different systems such as JIRA, Git, Gerrit, Perforce, Integrity, and other proprietary internal tools
- Took ownership of the development of an existing BlackBerry 10 app in C++, improving and updating it for newer versions of the OS through fixing bugs and introducing new features that capitalized on the capabilities of newer devices
- Developed an internal Android app to fill an existing need within the company, successfully learning Android development basics in parallel to regular duties of the job

Software

AutoCAD
Altium
Cadence
EAGLE
LTSpice
PADS
Solidworks
Xilinx Vivado
Altera Quartus
Microsoft Office
Linux

Awards

WatPD Engineering Entrance Scholarship

Received for academic and extracurricular excellence

University of Waterloo, Waterloo, ON

September 2013

Governor General's Academic Bronze Medal

Received for achieving the highest average upon graduation

King City Secondary School, King City, ON

June 2013

Extracurriculars

Member of Waterloo Formula Electric

May 2016 - Present

- Worked with various teams in a cross-functional role, involved with the electrical hardware, chassis, and aerodynamics sub-teams
- Worked on prototyping an inertial testing rig to accurately measure and define the turning characteristics of the vehicle

Electronics and Hardware Prototyping

2013 - Present

- Designed and prototyped practical circuits such as an AUX-to-Bluetooth module for my car, a variable power supply for future projects, and addressable LED string lights for room decoration
- Experimented with various small projects focused around the 'Internet of Things' using a Raspberry Pi and Photon wi-fi development kit
- Gained experience in designing and assembling mechanical systems through construction of a 3D printer, custom wooden rack, and other project enclosures

Self-Guided Programming and Software Systems Projects

2012 - Present

- Designed and created my personal website, www.krisztiankurucz.ca, using HTML, CSS, and Javascript to craft a modern user experience
- Wrote plugins for a popular Java-based game, one of which became popular and was downloaded over 1000 times by the community
- Created and setup a promotional website and e-mail newsletter system for a community run series of open mic events at www.yropenmic.com

Engineering Orientation Leader

September 2014, 2015, & 2016

- Led, instructed, and supervised students, as well as participated in the setup and tear-down of most events in an administrative role (in 2016)
- Took responsibility for an entire colour group of over 80 students, with the help of only two other orientation leaders (in 2015)
- Organized and supervised incoming first-year students, ensuring they were engaged and having fun during orientation week activities

Interests

professional: app creation, data analysis, electronic design, programming, prototyping, web design, woodworking

personal: biking, cooking, photography, reading, running, snowboarding, travel

References

Available upon request.