JEREMY WANG

• Mechatronics Engineer • 20382498 •

http://www.eng.uwaterloo.ca/~jy7wang
jy7wang@uwaterloo.ca
(226) 339 - 1454

PROFILE

I am an ambitious hardware hacker, a retired college football player and an all-around passionate engineer who is ***seeking employment*** where I can pour out the knowledge and skills I have acquired from the past 5 years of school and internship experiences to help change the world!

SKILLS

Hardware:
- Schematic capture and PCB layout
- PCB prototyping, design and assembly
- Digital and Analog circuit design and debug
- Microcontrollers, ICs, transistor logic expertise
- EAGLE, LTSpice, PSpice, PSIM Labview
- FPGA Coding, Altera Quartus II, Solidworks

Software:
- Embedded firmware development
- Large scale web development
- Java, C#, C, C++, Python, MATLAB, SQL
- Javascript, HTML, CSS, JSP
- Eclipse, Visual Studio, SQLyog
- JIRA, Subversion, Git

EDUCATION

Bachelor of Applied Science, Mechatronics Engineering Sept 2010 - Apr 2015
- University of Waterloo - Cumulative Avg: 82%

PROJECTS

Sonar RGB LED Cube
- 4x4x4 RGB cube with custom installed sonar sensors to allow user motion control
- LEDS driven with TCL5940 drivers and controlled by custom made controller
- Custom programmed animations and 3D sonar game mode

LED Word Clock
- Display time in words by driving LEDs using ULN2003AN drivers controlled by shift registers
- Custom designed controller using the ATmega328 chip and programmed in Arduino IDE

WORK

Hardware Design Engineer, *Lumotune Inc, Kitchener, ON* Apr 2014 - Aug 2014
- Designed, simulated, and prototyped high voltage and high frequency drivers to control **LCD films** through a passive matrix architecture
- Developed power switching circuits controlling variable voltage and frequency; implemented circuit techniques such as invertors, rectifiers and filters
- Used **Electric Imp** microcontroller to interface with various components and ICs such as I/O expanders, shift registers, high voltage drivers, MOSFETs and TRIACs
- Schematic capture and PCB layout experience using **Cad EAGLE**
- Circuit simulation experience using **LTSpice** and **PSpice**

Software Engineer, *IMS Inc, Waterloo, ON* Sept 2013- Dec 2013
- Backend development for large-scaled software projects in Java using Eclipse IDE
- Frontend web UI design using **Javascript**, **JSP**, **HTML**, **CSS**
- Wrote **Python** scripts and **SQL** queries for data mining and increased testing efficiency

Display Engineer, *zSpace Inc, Mountain View, CA, USA* Jan 2013 - Apr 2013
- Knowledge of **LCD display** architecture, color theory and 3D display technology
- Designed an automated data collecting robotic system by integrating a ThorLabs motor controller, stepper motors and a Konica Minolta Display Color Analyzer
- Programmed the software GUI in **Visual C# .NET** for automatic batch measurements
- Coded **MATLAB** scripts to process measurement data files and generate plots to demonstrate display parameters and characteristics
- Installed the automation system to the display manufacturer and trained production line workers in using the software to increase production efficiency

Engineering Intern, *IGNIS Innovation, Waterloo, ON* May 2012 - Aug 2012
- Performed hardware bring-up tests of digital and analog PCBs
- Experienced in soldering techniques and using lab equipment such as scopes and DMMs
- Hacked a Canon scanner and automated display measurements using the Windows Image Acquisition API in **Python**
- Designed and developed a data parsing software GUI in Visual C# .NET

AWARDS

Academic All-Canadian, Canadian Interuniversity Sport Sept 2014
Undergraduate Student Research Award, NSERC of Canada Apr 2014