**Earl Wood**

**270-799-2344**

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**Electronics Engineer / Circuits & Microcontrollers**

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| **SUMMARY** |
| A well-versed professional, finishing his PhD in Physics this July 2015, working as an Electronics Engineer. Experience in designing analog and digital circuits, microcontrollers, ADC’s, Solenoids like motors and valves, and displays like LCD screen and GUI. Performed various testing on circuits like continuity testing, maximum and minimum voltage inputs, max amperage outputs on circuits, and signal testing of I2C, SPI, and Serial buses. Knowledgeable of writing and testing software for communication protocols between microcontrollers. Excellent communications skills and can work independently and in a team. |
| **TECHNICAL SKILLS** |
| * C++
* Python
* JAVA
* Processing.IDL
* MySQL
* Super Mongo
* Image Analysis
* Signal Processing
* Electrical Engineering
 | * Data Analysis
* Hardware Interfacing
* GUI design
* Microprocessing
* Technical Writing
* Microsoft Office
* Linux/Unix
* Analog and digital circuits
* ADC’s
 | * Solenoids
* Oscilloscopes
* Digital multimeters
* Signal testing
* Circuit Testing
* TinyCAD
* Raspberry Pi
* Arduino
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| **EDUCATION** |
| **University of Wyoming – Ph.D. in Physics**Laramie, WY2015 |
| **Western Kentucky University – B.S. in Physics**Bowling Green, KY2006 |
| **PROFESSIONAL EXPERIENCE** |
| **University of Wyoming**, Department of BotanyLaramie, WY (May 2014 – Present)Electronics Engineer* Designed and built custom data logging and automated research equipment
* Designed electrical analog and digital circuits, microcontrollers, ADC’s, Solenoids like motors and valves, and displays like LCD screen and GUI
* Tested all equipment to determine accuracy, precision, and feasibility of each design
* Performed circuit testing using oscilloscopes and digital multimeters
* Performed continuity testing, maximum and minimum voltage inputs, and max amperage outputs of circuits
* Experienced in Signal testing of I2C, SPI, and Serial buses
* Knowledgeable of writing and testing software for communication protocols between microcontrollers
* Designed circuits/schematics using TinyCAD
* Wrote software in C++ and JAVA to interface hardware with external computers
* Hands on experience in using Arduino (any flavor) and Raspberry Pi
* Operated a budget, communicated with suppliers, and ordered equipment
* Collaborated with researchers from other disciplines on each project
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| **University of Wyoming**, Department of Physics and AstronomyLaramie, WY (August 2010 - May 2015)Teaching Assistant* Developed excellent communication skills through teaching all physics courses through junior level
* Courses include Physics 1-3 (Physics 2: Introduction to Circuits)
* Privately tutored struggling students
* Developed a new course in electronics and micro-processing (based on the Arduino and Raspberry Pi) for physics majors
* Designed and wrote the text for the course
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| **University of Wyoming**, Department of Physics and AstronomyLaramie, WY (May 2011 - August 2013)Research Assistant* Operation of a multi-million dollar observatory for nightly observing runs
* Image processing and spectral analysis of astronomical spectra using IRAF
* Uploading and sharing of data remotely using SSH and SVN
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| **Ball State University**, Department of Physics and AstronomyMuncie, IN - 2008 to 2010Graduate Assistant* Managed operations of two public and one teaching computer lab including technical support, installation and updating of software, and virus removal
* Maintained student accounts on the Window Server
* Operated the large format poster printer for all hard sciences on campus
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| **Western Kentucky University**Bowling Green, KY (2004 to 2008)Research Assistant* Image analysis and signal processing using IRAF and IDL.
* Archival Research and Database Mining using MySQL
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| **AWARDS** |
| **Ellbogen Outstanding Graduate Assistant Teaching**May 2015* The Ellbogen Outstanding Graduate Assistant award goes to one graduate teaching assistant in each college each year
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