**Earl Wood**

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 1605 Johnson Drive

Bowling Green, KY 42101

**Electronics Engineer / Circuits & Microcontrollers**

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| **SUMMARY** |
| I am a well-versed professional, finishing my PhD in Physics this July 2015, working as an Electronics Engineer in a multi-disciplinary team. I have experience in organizing projects and taking them from concept to completion. I work well with customers to deliver high quality products at low cost. Also, I am proficient at writing instructional material for technical training of student and possess excellent communications skills and can work independently and in a team environment.  |
| **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** |
| **Ph.D. in Physics:** graduation expected in 2015University of Wyoming – Laramie, WY**B.S. in Physics:**  2006Western Kentucky University – Bowling Green, KY |
| **PROFESSIONAL EXPERIENCE** |
| **University of Wyoming**, Department of BotanyLaramie, WY (May 2014 – Present)Electronics Engineer* Developed a process control system for maintaining unique volumetric water contents across multiple soil samples
* Designed a customer focused replacement data logging system at $\frac{1}{10}$ the cost of the original
* Tested all equipment to determine accuracy, precision, and feasibility of each design
* Maintained bills of materials for each project and worked within a budget
* Wrote instructional manuals for each finished project including electrical schematics, assembly and operational instructions.

**Earl Wood; resume page 2/2****PROFESSIONAL EXPERIENCE, CONTINUED*** Utilized Serial communication to interface multiple microcontrollers with computers and developed JAVA based GUI control systems
* Built analog and digital circuits around microcontrollers programmed in C++
* 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 a new course in electronics and micro-processing (based on the Arduino and Raspberry Pi) for physics majors
* Designed experiments, equipment, and wrote the instructional manual for technical training of the students
* Lead groups of students in development of class projects using DC drives, stepper motors, Bluetooth, RFID, HIDs, and a variety of sensors.
* Developed excellent communication skills through teaching all physics courses through junior level
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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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