Sean M Hamlet

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EDUCATION

University of Kentucky   Lexington, KY
Master of Science in Electrical Engineering | GPA: 4.0/4.0   2011 – 2012
Doctor of Philosophy in Electrical Engineering | GPA: 4.0/4.0   2013 – 2017

Western Kentucky University *jointly with* **University of Louisville**   Bowling Green, KY
Bachelor of Science in Electrical Engineering | GPA: 4.0/4.0   2006 – 2010

PROFESSIONAL EXPERIENCE

University of Kentucky   Lexington, KY
Research Assistant – *Cardiac Imaging Technology Lab*   2013 – Present
- Developing algorithms and software to understand and improve breathing-related issues during advanced cardiac MRI.
- Developing breathing-controlled interactive videogame using MATLAB for patients to use during MRI scanning.
- Tested videogame in 50 children; reduced MRI scan time by over 50% (Project funded by National Institutes of Health).
- Working closely with Systems Administrator to improve lab codebase for analyzing and viewing data.

Research Assistant – *Center for Visualization and Virtual Environments*   2012
- Researched techniques to understand voice production related to vocal fold movement.
- Developed algorithms to identify acoustic features (related to voice function) in voice recordings.
- Computed accuracy of acoustic feature extraction methods to image processing techniques.

Lexmark International, Inc.   Lexington, KY
EE Hardware Student – *Sensor Team*   Summers 2013, 2012, 2011
- Designed and performed experiments to characterize tolerance of analog optical sensors.
- Developed algorithms for PIC microcontroller firmware (in C) to improve accuracy of sensors.
- Researched and designed new imaging sensor for scanning purposes.

AWARDS AND LEADERSHIP

National Institutes of Health Research Fellowship Award (3 years – $92,736)   2015 – Present
Outstanding Electrical and Computer Engineering Graduate Student   2013
President, IEEE Eta Kappa Nu, Beta Upsilon Chapter   2013
Teaching Assistant EE280 – Digital Logic   2011 – 2012
Charter President, Tau Beta Pi, Kentucky Gamma Chapter   2010

PROJECT EXPERIENCE

Personal Projects   2016 – Present
Local Weather (github: local-weather) – Developed local weather app using JavaScript, the openweather API, and AJAX.
Simon Game (github: simon-game) – Developed classic Simon Game using JavaScript, Bootstrap, and jQuery.
Calculator (github: javascript-calculator) – Developed calculator using JavaScript, Bootstrap, and object-oriented design.

Applied Physics Institute (WKU) | *Design of Remotely-Controlled ATV Robot*   2009 – 2010
- Developed more efficient Visual Basic code (reduced lines of code by over 50%) and designed simplified wiring diagram.

TECHNICAL SKILLS

Languages: MATLAB, JavaScript, HTML, CSS, Python, C, and Git | Familiar: Bootstrap, jQuery, AJAX, Flask
Other: R, LaTeX, Markdown, Microsoft Office Suite, Adobe Illustrator, Adobe Photoshop