Sean M Hamlet

Lexington, KY

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EDUCATION

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

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 (PhD Student) – *Cardiac Imaging Technology Lab*   2013 – Present
- Developing software to understand and improve breathing-related issues during advanced cardiac MRI.
- Developing breathing-controlled videogame using MATLAB and image processing for patients to use during MRI scan.
- Testing videogame in 50 children; improving MRI scan efficiency by >50% (Funded by National Institutes of Health).
- Distributing videogame to collaborators at remote research sites.
- Assisting with improvement of lab code repository for analyzing and viewing data.

Research Assistant (MS Student) – *Center for Visualization and Virtual Environments*   2012
- Researched techniques to understand voice production related to vocal fold movement.
- Developed algorithms in MATLAB to identify features of voice function in acoustic recordings in 46 volunteers.
- Computed accuracy of acoustic feature extraction methods against 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)   2015 – Present
  - Project Title: *Bringing advanced cardiac MRI into pediatric clinics using an interactive videogame*
President, IEEE Eta Kappa Nu, Beta Upsilon Chapter   2013
Teaching Assistant EE280 – Digital Logic   2011 – 2012
  - Assisted with grading and teaching for over 300 undergraduate students
Charter President, Tau Beta Pi, Kentucky Gamma Chapter   2010

PROJECT EXPERIENCE

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

TECHNICAL SKILLS

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