Joshua M. Irwin

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Education

Senior at The Pennsylvania State University – University Park
Studying for a Bachelor of Science in Information, Sciences, and Technology
Focus in Application Design and Development
Expected graduation: December 2018

Work Experience

Intern with the Army Cyber Institute, United States Military Academy, West Point, NY (January 2018 – April 2018)

- Will be working to develop computational cognitive models of complex skills in dynamic interactive environments and integrate them with deep learning models and explanation systems.
- Projects will provide insights into the processes and representations of the deep learning models to improve trust and interaction with human experts (Explainable AI)

Research Assistant, Penn State College of Information Sciences and Technology, University Park, PA (Winter 2016 – Present)

- Developing a web-based set of tools that allow users to create online tutors.
- Ruby on Rails implementation of a previous Java architecture.
- Project is to allow educators to create online tutors for students to access and use to build skills and to generate instruction.
- Involved with the development of features and developed functions for the application.

Programming Skills

Ruby	Java	SQL	Python	CSS	Unity
Ruby on Rails	JavaScript	Arduino C	HTML5	Git	C++

Projects

Robotics Project (Fall 2016 – Spring 2017)

- Integrating sensors and a microcontroller to allow a miniature vehicle to drive autonomously based on input from the environment.
- Completing work using the Arduino microcontroller and Arduino C language.

Designed Method of Reflow Soldering for High School Class (2013 – 2014)

- Researched current methods of soldering Surface-Mount Devices and developed a process that would allow future classes to utilize these components.
- Used an Arduino microcontroller to create a method of controlling heating profiles, allowing the incorporation of Surface-Mount Devices (SMDs) in the classroom environment.

Clubs

- *Penn State Robotics Club* (Fall 2014 – Spring 2017)
  - Built and developed projects based on the Arduino Microcontroller
  - Helped with tutorials on how to use the Arduino

Leadership Experience

- *Active with the Air Force Junior Reserve Officer Training Corps throughout all four years of high school*
  - Completed over one hundred service hours spread throughout two different units
  - Obtained the rank of Cadet Senior Master Sergeant