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