Megan Zimmerman

HRI Research Associate,
Full Stack Engineer

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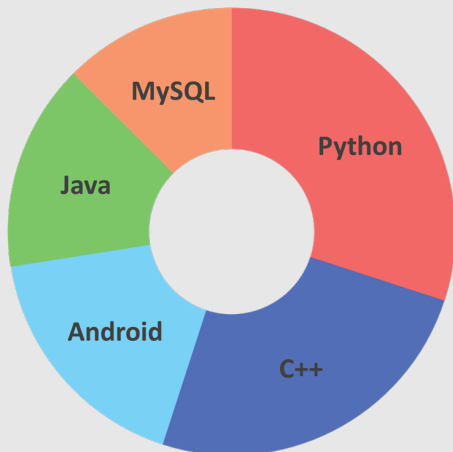
Skills

User Interface Design

Human Centered Computing

Natural Language Processing

Data Science

Artificial Intelligence

Object Oriented Programming

Languages

MySQL · Python · Java · Android · C++

Also experienced in ROS, Unity, RViz, PHP, arduino, Lisp and Mandarin.

Education

2012 - 2017 (Expected)	**BS., Computer Science**	University of Maryland, Baltimore County

Current GPA: 3.21/4
Specialization: Robotics and Human Computer Interaction

Projects

2016 **Robotic Telecommuting Virtual Reality Interface** NIST

- Developed a system using a Unity game scene to show output of a Kinect v2 camera to an HTC vive device, rotating the camera on a servo connected to an arduino based on head rotation input received from the HTC vive tracking system. A dual armed robot, ABB Yumi, is controlled using the 3d tracked hand controllers for the Vive. Used C#, arduino C and XML for robotic configuration files.

2015 **Medical Assistant Robotic Drug Administer** UMBC IRAL Lab

- Using python, amazon Echo sdk, and the Stanford CoreNLP library, designed and developed a system that parses ambiguous implicative natural language sentences related to the medical care of a human into robotic actions on a Kinova Jaco arm.
  🏆 *Poster presented at ICRA 2015 Workshop*

Experience

June 2016 - Present **Human Robot Interaction & Intelligent Systems Researcher** NIST

- Designed and developed robotic systems and interfaces for human robot collaborative tasks for the analysis of useful metrics for Human Robot Interaction.
- Organized and ran human studies for analysis of said metrics.

January 2015 - Present **Research Assistant** UMBC IRAL Lab

- Designed system architecture for a program that parses ambiguous natural language sentences to synonyms mapped to executable robotic commands.
- Organized team of students while working on said project, helping to navigate the complexities of motion planning for mobile manipulator robots, ROS, natural language processing, and Human Robot interaction.

January 2015 - Present **Undergraduate Teaching Assistant** UMBC

- Designed and coded application based data structure projects and developed grading scripts to grade said projects.
- Developed learning program for upper level transfer students for a smooth transition from Java to C++ on complex projects.

Involvement

2014-Present	**Center For Women in Technology (CWIT) Affiliate**	UMBC
2015-2016	**Cosplay Coalition President**	UMBC
2015-2016	**UMBC Connect Event Coordinator**	UMBC