Peer Review

"Integrating experimental sensors into Waggle Edge-Computing platform"

By: Caeley Harihara

During Learning on the Lawn: A Student Poster Symposium event, held on August 2nd 2017, I reviewed Caeley Harihara's poster: "Integrating experimental sensors into Waggle Edge-Computing platform". Harihara's poster was very interesting and intuitive because it painted a clear picture of the direction our project, Waggle, is heading towards.

During her presentation, she emphasized how the current waggle sensor-nodes, deployed by the Array of Things team around the Chicagoland area, record information on environmental conditions including light intensity, particulate matter, chemicals in the air, and surrounding meteorological parameters. However, to expand the breadth of information available through the Waggle platform and improve the functionality of the sensor-nodes, the Waggle team is integrating and testing new commercial, off-the-shelf water level, soil moisture, and airborne particulate matter sensors. This in turn will bring about a new beneficial product from the AOT sensor-nodes.

As of now, Harihara and her partner Jordan Fleming are testing these sensors in the laboratory, and have implemented a python script that publishes the sensor data to a particle-cloud on the web. From the cloud database, they then implement a python subscriber plugin script that pulls the data from the particle cloud and pushes it to Waggle's server "Beehive". The data can then be downloaded by other developers for further analysis and testing before the sensors are actually deployed to the AOT node.

From Harihara's poster presentation, I understood that she had a clear idea on what must be done to improve the sensor-technology the Waggle platform is using to achieve superior efficiency. Her presentation demonstrated the clear, concise methods she followed to attain the projects objective. The illustrations she selected made it easy for me to understand what type of sensors she tested and wishes to incorporate to the Waggle platform, in addition to the process of implementation.

As a presenter, she did a phenomenal job maintaining focus and eye contact while describing her research with the utmost enthusiasm. As a result, her speech captured my attention until the very end. Her research and confidence made me feel that this project is in good hands.