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IS439 & ISSS614 – INTERNET OF THINGS: TECHNOLOGY & APPLICATIONS

APR POSTER DAY

2017

TIME:
VENUE:

5PM ~ 7PM

CONCOURSE T-JUNCTION BASEMENT 1
(BRAS BASAH MRT STATION EXIT 'C')
SINGAPORE MANAGEMENT UNIVERSITY
70 STAMFORD ROAD, S178901



IoP Analytics

People are the most important resource in any organisation. **IoPA** is an IoT system that deploys beacons and sensors to capture employee interactions within the working space. The data captured can be married with existing HR database to give us a rich and detailed profile of employee engagement rates. This allows the HR and management teams to improve cultural fit and reduce attrition in the organisation.

Team RIoT's solution delivers targeted retail marketing through the use of credit card beacons, existing bank infrastructure and customer spend analytics. IoT technology is used to deliver discount coupons to the customer based on preference, location and historical transactions.

Count on Me looks at the effective use of IoT to monitor human traffic in a café setting and share analytics insights with the café owner and visitors. This project is done in collaboration with the DHL Asia Pacific Innovation Center.

AgriSense is an IoT-based social business solution targeted at farmland owners who for various reasons have moved away from their farmlands and cannot monitor their farms, leading to empty farmlands or inefficient farming. The solution comprises a scalable architecture and makes use of a variety of sensors such as temperature, moisture, pH, soil salinity, soil alkalinity etc. The system is designed to invoke alerts when it senses irrigation, pesticide or fertilizer requirement at a given farm. In response to the alert, the farming experts are dispatched to the farm to do the needful and report back.

AgriSense



Pingow is an IoT innovation which aims to enhance and create a positive shopping experience for wheelchair users. This is done through leveraging on beacon technology and shoppers' preferences data for sense-making to offer personalised assistance and shopping recommendations.



Ever felt uncomfortable with the temperature while taking the MRT? Fret not, **TEMP** is here to help. Our Train Environment Monitoring Platform (TEMP) uses past environmental data gathered to determine the ideal temperature for train cabins. Not convinced? You can even influence the current temperature should you feel too hot/cold just by a few taps on our mobile application! Tap TEMP, for comfort.



In events and gatherings, data collected for analysis is not only tedious but is also inaccurate and unreliable. **cereBROS** aims to address that through the use of beacon technology. By placing beacons throughout the event space, we can capture information such as foot traffic and movement patterns.



SmartJi aims to increase efficiency of the chicken farm by monitoring and controlling environmental factors such as temperature, humidity and light levels to provide chickens with the optimal environment to maximize egg production. SmartJi can also help business owners perform data analysis to better manage farm conditions.



ZooCreepers involves the issuance of a tablet device installed with a custom application. It utilizes Bluetooth Low Energy beacons to broadcast signals to these devices, pushing relevant important educational material, routing information and also keep track of crowd estimates at each exhibit.



Project SaveBuilderBob aims to reduce death at construction site caused by workers not wearing their helmet while doing construction work. We utilize touch and ultrasonic sensors to detect if a worker is wearing his helmet, as well as beacons to identify non-danger zones. When a worker is not wearing a helmet in danger zones, the safety officers will be notified of his location and can then take the necessary actions.



EYE' OT utilises Bluetooth Low Energy (BLE) beacons and Raspberry Pi to reduce the number of unreturned trolleys. Beacons are placed around the supermarkets to broadcast signals and Raspberry Pi are placed on the trolleys. The signal picked up from the beacons allows supermarket to track the trolleys effectively and trigger the alarm when trolleys are pushed out of the boundaries. This reduces the amount of time and effort needed for the enforcement officers to search or retrieve unreturned trolleys.



SchoolBuzz is an IoT solution that optimises travelling routes for bus drivers who send different students back home daily due to extra curriculum activities. The solution identifies best connecting routes and alerts bus drivers of the alighting students, giving the drivers an ease of mind.



Laundronauts uses an IoT-centric system to reduce time wasted by school hostel residents when doing laundry. Our solution would be a web application that collects data from the sensors, which suggests the availability of the washing machines. In return, hostel residents will be able to make informed decisions, hence saving time and effort when doing laundry.