Winners of Code::XtremeApps:: 2017

Junior Category – Winners

Prize	Team	School / Organisation	Submission Description
1st	**Pro Hackers** Team members: • Puneeth Choudhary Kollu • Dylan Leong • Noor Iman Bin Ahmad Fairuz	Ulu Pandan Stars	Smart Bus stop solution. Bus stop scenario - Using the sensor to detect rain and moisture which allow the shelter to expand. On top of that, they also include fans to reduce the heatwave. A buzzer was also included to inform consumer that their bus is approaching.
2nd	**Kick Your Ass** Team members: • Anjali Curic • Sophia Curic	VI Dimensions / Bukit View Primary	Healthy living. Rehabilitation. Different microbeads to control different functions. Displayed a maze structure build with pipes which will give command for the patient to follow. Gamification concepts were introduced.
3rd	**#dkdc** Team members:	Ulu Pandan Stars	Micro:bit for wallet, transaction between 2 micro:bits, LED will display the remaining balance. Not only people to people but also allow transaction

			between machine and people. For example - the umbrella machine (rental).
	• Gillian Ng Xi Wen • Audrey Leong • Tan Gao Hong		

School Category – Winners

Prize	Team	School / Organisation	Submission Description
1st	**Hacker Republic** Team members: • Doreen Ting Luo Qi • Jerrayl Ng • Liu Chen-En	Dunman High School	(In response to challenge #8) Horus Event Tracker is an application that allows administrators and space owners to monitor the crowd engagement of ad-hoc events and exhibitions. The application consists of three modules: The sensor-enabled Arduino connected to a Raspberry Pi, a Raspberry Pi and a Pi Camera, as well as social media analytics. Using the sensors connected to the Arduino, a specific exhibit or small area can be monitored. The sound level of the area, the number of people passing by, as well as the number of wireless and bluetooth connections in the area is used to measure it's 'Buzz', how much activity is in the area. The light sensor as well as the button module is used for users to rate the exhibition or part of the event. The average dwell time of visitors is also measured using the light sensor, which reflects the public's interest level The Raspberry Pi camera uses the openFrameworks library and Footfall motion tracking application to count the number of people in a certain area. It monitors the traffic in the level, using these metrics to calculate the number of people in the area over time.

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			The last module scoops data from social media, and uses the TheySay sentiment analysis API to determine the user response to the exhibit. Using the keywords of the Exhibition name and Location, this module gauges the overall positive/negative sentiment of the event/exhibition, and displays the top ten most positive and most negative comments found in the sample, providing the organizer with constructive feedback.
2nd	**No Code No Life** Team members: • Ni Tianzhen • Yan Zhiwen • Teng Hongyu	National Junior College	(In response to challenge #7) To reduce the use of manpower in the cleaning process of shopping mall floors and to provide an intelligent solution, this project achieves automatic mapping of cleaning areas, fleet management, and flexible scheduling of robot cleaners. The automatic mapping and routing is done by snake shape path fill and a* path finding, while management of robot cleaners is achieved with flexibility and in real time by the server-client architecture of the system and socket connections between the server, clients and robots. Finally, we prototyped a robot cleaner using Intel Edison for Arduino, implementing features including network connectivity and obstacle avoidance.
3rd	**AppWizards** Team members: • Khua Yan Han, Cedric • Daniel Choo • Yong Yi-Tze Elliot	Hwa Chong Institution Raffles Institution Anglo-Chinese School (Independent)	(In response to challenge #4) Our Project is a visual representation of stock cargo and inventory movements. It contains floor plans fully customizable and restock management options. It has prediction EWNA Algorithms for analysis and an RNNA algorithm to reduce cost, time and improve efficiency in smart inventory warehouses. Our solution also has a live video/snapshot feed for visual verification.

Open Category – Winners

Prize	Team	School / Organisation	Submission Description
1st	**Neptune** Team members: • Lim Jiayi, Jay • Wang Yaofeng • Oh Yong Liang	PSA Corporation Pte Ltd	(In response to challenge #1) Safety is a top priority at PSA, and we intended to explore solutions to improve in this area. With IoT, we are able to make use of on-board accelerometer, GPS and other sensor data together with Complex Event Processing capabilities in streaming analytics provide real-time feedback for immediate reinforcement of good driving behavior, and statistical analysis to post-shift feedback for targeted training and long-term improvement.
2nd	**XCVI** Team members: • Denise Tan • Sherina Toh Shi Pei • Jarrett Yeo Shan Wei	NUS/ NTU	(In response to challenge #2) We have created a mobile app called iOffice@PSA to aid the implementation of a smart office in PSA's future office. Our app features include a reservation based booking system and a first come first served system, enabled by iBeacon triangulation, security features, smart suggestion system and a central resource management data analytics dashboard.
3rd	**R3D3** Team members: • Lim Jia Song John	NTU	(In response to challenge #9) A web platform that pulls feedback of various types (image / speech/ text) from various sources (Facebook / email/ telephone). It then classifies the feedback and gives a priority score for how important or urgent the feedback is. With that, feedback of different urgency levels can be

			escalated to different people at different speeds. Templated responses can also be used for similar feedback that is of low priority. A chatbot was also implemented to reply to certain kinds of feedback and escalate feedback that cannot be handled by machines to a human operator, and analytics is used to provide insight towards the kind of feedback received at various times of the day.
	• Seetoh Rui Ming, Daniel • Nisha Srinidhi		

Special Prizes Award Winners

Prize	Team	School / Organisation	Submission Description
Best & Innovative by Design Prize (sponsored by PSA)	**XCVI** Team members: • Denise Tan • Sherina Toh Shi Pei • Jarrett Yeo Shan Wei	NUS/ NTU	(In response to challenge #2) We have created a mobile app called iOffice@PSA to aid the implementation of a smart office in PSA's future office. Our app features include a reservation based booking system and a first come first served system, enabled by iBeacon triangulation, security features, smart suggestion system and a central resource management data analytics dashboard. *Also 2nd prize winner in open category.*
Security by Design Prize (sponsored by CSA)	**InsertTeamName** Team members: • Yin Ji Sheng	Singapore University of Technology and Design	(In response to challenge #2) Project HomeDesk aims to make everyone's work environment more personalised and make employees feel more at home. By making hot desking more personal, this will increase productivity in the workspace as compared to conventional office space.

	- Yim Tat Yuen Bernard - Nicholas Yeow Teng Mun		

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