Annex I: Winners of code::XtremeApps::2014 Hackathon

Open Category Winners

Total Teams Participating: 62
Total Participants: 160

Grand Prize
Invention name:
BlackBox
Team Name:
Tria Artifex
Members:
Wong Wai Tuck, 20
Kong Yu Jian, 20
Clarence Ngoh Peng Yu, 21

This year's Grand Prize of S$9,000 went to *Tria Artifex*, formed by Wong Wai Tuck and Kong Yu Jian, both aged 20, who are currently serving their full-time national service, and Clarence Ngoh Peng Yu, 21, a freshman from Singapore Management University (SMU). The team created *BlackBox*, a car crash detection system that shaves precious minutes off emergency response time in the event of an accident, and could mean the difference between life and death.

The *BlackBox* immediately signals for emergency responders upon detecting a genuine crash and activates a live camera feed to assess the condition of the driver. The device also sends data and alerts the nearest hospital with the driver's pre-registered vital medical details such as blood type, allergies and medical history to ensure a hospital is ready for a patient even before they are rushed through its emergency doors.

The team makes use of road traffic and motor accident Government data from the Land Transport Authority (LTA) and plans to log emergency response times per area to help

authorities locate danger spots and slow response areas to improve upon. For the innovative use of Government data, *Tria Artifex* was also awarded the data.gov.sg prize of S$1,000.

Second Place Prize
Invention name:
Wheelchair-data analytics

Teamname:
Austen

Members:
Lim Yun Cai, 31
Xu Chengyang, 28
Matthew Lee Kay Fei, 21

Austen went home with the second prize of S$6,000 with their solution for Singapore's wheelchair users. The team, made up of three students from the Institute for Infocomm Research – Lim Yun Cai, 31, Xu Chengyang, 28, and Matthew Lee Kay Fei, 21, realised that services like Google maps are not useful for wheelchair users as they don't show whether paths are wheelchair-friendly.

As part of their efforts to map these routes, *Austen* turns to crowd sourcing and created unobtrusive wheelchair-mounted data loggers to collect data such as path inclines and bumpiness. The solution aims to empower wheelchair users to venture out of their comfort zones and discover more of Singapore by themselves. The data collected by their platform can also be used to identify key areas where improvements in wheelchair accessibility are needed.

Third Place Prize
Invention name:
GuidePi

Teamname:
RGIS

Members:
Andre Ng Hao Yuan, 24
Lam Kee Wei, 23
Heng U San, 21

RGIS, a team formed by three SMU students – Andrew Ng Hao Yuan, 24, Lam Kee Wei, 23, and Heng U San, 21, bagged third prize of S$3,000 with their *GuidePi* system to make public buses more accessible for the visually impaired. The *GuidePi* hotline selects the bus route to a chosen destination, while a personal device alerts the user when the correct bus is approaching, as well as when the bus is approaching the alighting point. A device in the bus also also alerts the driver that there is a visually impaired person boarding their bus, ensuring a pleasant and smooth journey for both the bus driver and visually impaired traveller.

Junior College/Secondary School Prize

Invention name:

Cookerino

Teamname:

Need 3K To Repair Caps Lock Key

School:

Dunman High School

Members:

Melvin Foo Mawqing, 17

Teo Chen Ning, 17

David Fan, 18

To encourage technology learning at an earlier age, this year's Hackathon had a special category for the top performing Junior College / Secondary School team. The prize, a state-of-the-art-drone for each team member, went to *Need 3K To Repair Caps Log Key*, comprising Melvin Foo Mawqing, 17, Teo Chen Ning, 17, and David Fan, 18, from Dunman High School.

Their invention, called *Cookerino*, is a smart cooking application that crowd sources digital recipes and is able to automate certain aspects of the cooking experience through sensors on a cooking instrument to monitor temperature, weight of ingredients, pan rotation, etc. The application aims to encourage more people to engage in home cooking, share their favourite recipes and increase appreciation for local home-cooked cuisine.

Junior Category Winners

Total Teams Participating: 39

Total Participants: 94

Grand Prize Winner

Invention name:

Multi-colored Merlion T-Shirt

Teamname:

Pegasus

Members:

Ong Suet Myn, 11

Ong Shueh Tze, 9

Pegasus, a brother-sister team of Ong Suet Myn, 11, and Ong Shueh Tze, 9, nabbed first prize in the Junior Category, winning a LEGO Mindstorm set and 3-D Printing Pen each. The siblings, both from Ai Tong School, created a Merlion on the back of a t-shirt using plastic spoons and Chibitronics circuit stickers. They developed a colour scheme that corresponded to the various races in Singapore, demonstrating their understanding of Singapore's multiculturalism as their favourite part of Singapore.

2nd Prize Winner

Invention name:

National Day Outfit

Teamname:

Kickstars

Members:

Nancy Busch, 10

Sharmny D/O Rajendrawaramah, 12

Kickstars great friend pair created a National Day outfit design, comprising of a t-shirt and shorts. The team, comprising Nancy Busch, 10, and Sharmny D/O Rajendrawaramah, 12, used circuit stickers to light up decorations on the clothing, such as a yellow Merlion and colourful fireworks. They took second place and won a 3-D Printing Pen and a set of Littlebits each.

3rd Prize Winner

Invention name:

Interactive Quiz on Singapore

Teamname:

The Electrons

Members:

Ethan Lim Kai Ler, 11

Maximus Jared Ee En Jie, 9

Olivia Tin Yunn Yip, 10

The homeschooled trio of Ethan Lim Kai Ler, 11, Maximus Jared Ee En Jie, 9, and Olivia Tin Yunn Yip, 10, created an interactive quiz based on data given by data.gov.sg. While playing, players have to answer questions by pressing buttons corresponding to their chosen answer. If the answer is correct, the button lights up. This showed an impressive understanding of circuitry. The team took home an iRobo kit each.

Junior Category Data.gov.sg Prize

Invention name:

3D Box Of Singapore

Teamname:

cir-CUTERS

Members:

Guru Anand Anish, 10

Nidhi Ananya Anand, 7

The Junior Category's data.gov.sg prize of S$500 went to the brother and sister team of Guru Anand Anish, 10, and Nidhi Ananya Anand, 7, from team *Cir-Cutters* for their remarkable understanding and analysis of the data provided, presented in an all-in-one 3D view box with key information about Singapore's population, historical monuments and key places of interest.