Smart Programming and Its Applications
-Building Robotics with Arduino

Contents

Program Duration
4 Days, 9.00am – 5.00pm

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Program Content

- ➤ **An Overview of Arduino**

- ➤ **The World of Arduino and Parts**

- ➤ **Dancing Light with LED**

- ➤ **Ecosystem of Sensors**

- ➤ **Detecting Light, Temperature and Humidity**

- ➤ **Detecting Motion**

- ➤ **Obstacle Detection with Ultrasonic Distance Sensor**

- ➤ **Following Line using Infrared Line Sensor**

- ➤ **Switching On/Off Applications and Anything in Between**

- ➤ **Taking Input from a Keypad**

- ➤ **LCD Output**

- ➤ **LED Display**

- ➤ **Using a Relay**

- ➤ **Servo Motor**

- ➤ **Wireless Communication using WiFi and BLE**

- ➤ **IoT Logging**

- ➤ **Building Robots**

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Alpha Guide(s)

Mr Tan Wee Siong, a Mathematician and Information Technologist by training, is a Business Domain Expert Facilitator with The Alpha Explorer Program.

Wee Siong earned his Bachelor of Science degree majoring in Mathematics from the National University of Singapore and a Master of Business degree specializing in Information Technology from Curtin University of Technology, Australia. He also holds a Graduate Diploma in Financial Management from the Singapore Institute of Management.

Wee Siong has more than two decades of multi-faceted experience in Information Technology and its applications. He has been involved in software development in the mainframe applications for many years in banks and American MNCs where he was responsible for the design and implementation of banking systems and global B2B e-commerce to meet new business requirements.

Besides being involved in Web Programming and Applications, Internet of Things (IoT), he also contributed to the education of the next generation of Information Technology practitioners in many education institutions.

In addition to the above, Wee Siong has been covering the Asia Pacific region for businesses and has also contributed to the education of the next generation of Information Technology practitioners as an undergraduate supervisor with the Singapore Institute of Management.

Mr Hew Ka Kian comes with a solid training in the workplace dealing with electronics and programming since graduating from Nanyang Technological University.

His interests in creating things have seen him dabbling in AI like Genetic Algorithm, hardware like Raspberry Pi and Arduino and making apps for Android and iOS app.

Another aspect of Ka Kian is his belief and passion in sharing the joy and knowledge in programming and electronics with like-minded people.

For more information, please contact Financial Markets Simulation Centres (FMSC) at
Tel: +65 9850 2567 | Email: marketing@TheSingaporean.com | Website: www.Alpha-Explorer.com

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