FOSSASIA 2016 Mobile Workshops

Mobile Design Making Program Workshop
Develop Your First Mobile Application
Mobile Pocket Science Lab - Learn Science by Exploring and Experimenting
Build Android Applications with App Inventor 2
Introduction to the Raspberry Pi for total newbies
Programming Kara, the Ladybug. Moving on to real mobile Robots

Mobile Design Making Program Workshop

- Duration: 2 hours
- Lead instructor: Jamen Loh
- Facilitators: Dang Hai An, Jurvis Tan

In this 2 hour workshop, we will be introducing the idea of Design Making and how it can be relevant to Education today. Design Making is an approach to problem solving with a focus on making-and-iterating. Tapping on the idea of Design Thinking, making turns concepts into actual prototypes focus on mobile apps and getting it to market for feedback allows robust iterations to happen for a better product-demand fit.
Participants experience the prototyping and iteration stages of Design Thinking, working on proposed challenge statements after which they will start prototyping. The solutions will be subjected to a round of feedbacks before improving them on a second iteration which will see vast improvements from the first version. This program is suitable for participants from 12 and above

Develop Your First Mobile Application

- Duration: 2 hours
- Lead instructor: Jigyasa Grover
- Facilitators: Manan Wason, Sudheesh Singanamalla

With over one billion devices activated, Android is an exciting space to make apps to help you communicate, organize, educate, entertain or anything else you’re passionate about. Clearly there’s a demand for Android app development, and it’s turning the platform with the lovable green mascot into more and more of a strong first choice rather than just a secondary option.
The session aims at introducing budding developers with the basic concepts and terminology in Android Development. It shall begin from scratch and discuss how to setup the environment and build a very own personal Android App with a Splash Screen for starters.
Mobile Pocket Science Lab  - Learn Science by Exploring and Experimenting

- Duration: 2 hours
- Lead instructor: Praveen Patil
- Facilitators: Dr.Udaykumar Khadke

Pocket Science Lab is yet another ambitious project from FOSSASIA with the objective to develop open source hardware and software technology to improve science education by changing the way we teach and learn. PSL@FOSSASIA aims to deliver low-cost lab equipments to millions of students and young scientists and enable them to learn science by experimenting and exploring.

ExpEYES is an Open Hardware and Free Software framework for developing science experiments, classroom demonstrations and projects without getting into the details of electronics or computer programming. It converts your PC into a portable mobile science laboratory.

In this workshop participants will be able to do hands-on science experiments covering various concepts like electricity, electromagnetic induction, sound, interference, oscillations etc.

Build Android Applications with App Inventor 2

- Duration: 1 hour
- Lead instructor: Preetam Rai
- Facilitators: Trilok Tourani

The workshop is suitable for everyone even if you do not have a technical background. During this 1 hour, you will learn how to build an android app from a web-base interface.

App Inventor for Android is an open-source web application that allows newcomers to computer programming to create software applications for the Android operating system (OS). It uses a graphical interface, very similar to Scratch and the StarLogo TNG user interface, which allows users to drag-and-drop visual objects to create an application that can run on Android devices.

Introduction to the Raspberry Pi for total newbies

- Duration: 1 hour
- Lead instructor: Luther Goh
- Facilitators: Fazli Mansor
This workshop serves to give a non intimidating introduction to the Raspberry Pi. Aimed at the total beginner, it serves to give a non intimidating introduction to Raspbian and the commandline, and allow workshop participants to gain confidence in playing with the Pi. You will learn:

1. Installing the operating system
2. Basic understanding of Linux
3. First time Configuration
4. GPIO pins
5. A small preview of Python
6. Connecting Raspi’s to mobile devices via USB

Programming Kara, the Ladybug. Moving on to real mobile Robots

- Duration: 2 hours
- Lead instructor: Ulrich Norbisrath
- Facilitators: Rafal Kowalski, Aneesh Devasthale

Kara is a ladybug who lives graphical world behind your computer screen. You can program Kara to perform tasks in its world. For example, Kara can collect clover leaves and avoid tree stumps while doing this. Kara comes with its own graphical development environment. In this seminar, you will get an idea what programming is, how it works, which elements it uses as well as an idea how a computer program reacts to external factors. You will develop understanding of logical connections and how to transfer these into an algorithm. Sounds a little complicated - don’t worry it isn’t. If we have time and access to Lego-Mindstorms kits, we can actually transfer Kara as Lego robot into the real world.