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Proposal for Internet of Things (IoT) Workshop

SDIoT: Internetworking the Devices around Us

About Us:

SDIoT is the most exclusive, invitation-only, network of high-caliber tech enthusiast who want to make the mark in the field of Smart Devices and Internet of Things. We leads our tech buddy on their technological transformation, providing innovative next-generation technology solutions and services that leverage deep industry expertise and an extensive partner community.

Workshop Details

Workshop Name : **Getting Started with Internet of Things (IoT)**

Workshop Duration : **Two Day**

Workshop Highlights

The internet of things offers an unparalleled opportunity to ignite profound business transformation across every industry. We are moving towards a new computing paradigm, which will involve trillions of connected devices. This workshop will leverages and explores the infrastructure, communication, sensor technologies, networking technologies, data/storage/analytics and security aspects of IoT. Participants taking this workshop will be introduced to the fundamentals of the IoT paradigm, including hardware platforms, communication protocols, and the types of services that can be enabled over this ecosystem.

Course Content

The workshop is planned for one day with the following sessions:

Day-1 Session-1 (Theory)	Day-1 Session-2 (Hardware)
▣ IoT: What & Why ▣ Interoperability of IoT systems ▣ IoT Analytics & Applications	▣ Introduction of Node MCU ESP8266 ▣ Interfacing electronics parts with Node MCU ▣ Sensors, Actuators and Protocols
Day-1 Session-3 (Software)	**Day-2 Session-4 (Cloud Integration)**
▣ IoT: Firmware & OS ▣ Remote Controlled using IoT ▣ Implementation of IoT Protocols	▣ Interfacing with Cloud Server ▣ Cloud Dashboard ▣ Bringing together Hardware, Software & Cloud
Day-2 Session-5 (Projects)	**Day-2 Session-6 (Projects & Wrap-up)**
▣ Planning and Building an IoT solution ▣ Work Breakdown Structure (WBS) ▣ Internet monitoring, control and Testing	▣ Data Acquisition and Cloud Server Integration ▣ Project Presentation ▣ Certificate Distribution

Learning outcomes

This workshop will teach you:

- ⇨ An understanding of how microprocessors, sensors, and radio hardware are integrated in an embedded hardware platform.
- ⇨ Learn how to make a low footprint battery powered IoT node & communicate between hardware & cloud.
- ⇨ Understand the fundamentals of configuring, launching, integrating & maintaining your own IoT solution
- ⇨ Gain knowledge on how interoperability is the key to dealing with the fragmentation of the IoT market.

Pre-requisites:

Basic Soldering; C programming language (basic level); Bread boarding (Good to know but not necessary)

Our Pedagogy

Our proposed workshop is based on experiential learning methodology, which involves a series of highly interactive and intense individual and group based activities. Our relationship with students continues even after the workshop where we offer online and offline technical support to convert their ideas into reality.

Our world @SDIoT revolves around:

Benefits/Takeaways / Motivation:

- Each Participant will get a participation certificate.
- SDIoT Toolkit: Participant in a group of 3 will get a toolkit.
- Each participant will get E-book and future guidance for their projects.
- Free Membership SDIoT SYK (Share Your Knowledge) Group: Lifetime Email support
- 50% Discount on SDIoT P^{4}U Lab Membership.
- SDIoT P^{4}U Lab t-shirts for top 2 rankers in every college.

SDIoT P^{4}U Lab:

P^{4}U lab is an initiative of SDIoT to inspire Tech-enthusiasts and Entrepreneurs to turn their ideas into new prototypes and products by giving them access to a range of advanced digital manufacturing technology. It began as a common working place of SDIoT members, and became into a collaborative platform of tech-enthusiast from Delhi NCR. You can find more information about P^4 Lab on the SDIoT Website.

Recent workshops conducted by us:

10th Feb 2017 @ JRE Gr of Institutions; Gr. Noida

18th Feb 2017 @ Jamia Millia Islamia; Delhi

11th Aug 2017 @ Salwan Public School, Gurgaon

Caveat and Contact for Correspondence

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