



CommTECH Course 2022 Online Edition

Course Title : Internet of Things for Smart City Applications during the Pandemic

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Media : Zoom Apps

Time : 17 – 28 January 2022 (GMT +7, Surabaya Zone Time)

Morning Session: 09.00 – 12.00

Synopsis

Internet of things, or IoT, has the potential to unlock possibilities that were unthinkable in the past. Combined with technologies such as telecommunications, big data, and machine learning, IoT is set to have significant impact in many areas, such as health, transportation, smart city, agriculture, and many more. Due to the current pandemic situation, the use of IoT technology has been forecasted to further increase. In this CommTECH Course 2021 Online Edition, we will cover the three main parts of an IoT system, namely the sensor or node device, the communications network and protocol, and the web service. Participants will work in groups and be guided to have hands-on experience, with the minimum requirements of a mobile phone and computer to build prototypes and proof of concepts. In this course, we will see how IoT technology can be applied in a smart city application and combined with machine learning as a supporting technology during the pandemic.

Tentative Schedule:

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	Opening Ceremony, overview of sub course A, Fun Bahasa Indonesia	Overview of IoT #1: What is IoT good for? Campus Tour, Cultural/Non Academic Session	Overview of IoT #2: What makes an IoT system? Cultural/Non Academic Session	Programming 101: Learn how to code Embedded systems 101: Learn how to code smart devices	Electronics 101: understanding the basics Live Session from Surabaya SMEs Center – Shopping Center	Surabaya Virtual City Tour
Week 2	Hands on: Let's build an IoT device Cultural/Non Academic Session	Internet 101: understanding the technology behind the web Hands on: Let's build an IoT system	Computer vision for smart cities Group Case Study	Computer vision: DIY Group Case Study	Unthinkable IoT: ideas brainstorming and Final Presentation Closing Ceremony	

