



**XAVIER INSTITUTE
OF ENGINEERING**

A SISTER INSTITUTION OF ST. XAVIER'S COLLEGE

INTRODUCTION TO RASPBERRY PI

04-05 MARCH 2022

Telecommunication Society Of Xavierites | tsxcommittee@gmail.com

EVENT DETAILS

Event Coordinators	Telecommunication Society of Xavierites
Time	11:30 am to 2:30 pm
Place	Antenna and Microwave lab
Department	Electronics and Telecommunication
No. of Attendee	30

AIM / OBJECTIVE:

The goal of the event was:

- (i) To teach basics of Raspberry Pi and install the Rasbian OS in your SD Card.
- (ii) To create a dashboard by using Node-Red.

RESOURCE PERSON: Mr. Alister D'Silva

Mr. Alister D'Silva is the Director in Absolute Motion Pvt Ltd. He earned his Bachelor of Engineering (BE) in Electronics and Telecommunication (EXTC) from Xavier Institute of Engineering in 2014. He has also worked at Satyam Enterprises as a Senior Sales and Experience Engineer, as well as in Trio Motion Technology as an Application Engineer.

SUMMARY:

The event began on 4th March 2022 where the members of TSX implemented the idea of peer to peer teaching. Our own members, Mr. Aditya Waichol and Mr. Spencer Lobo instructed the audience on how to download the Rasbian OS on a micro SD Card. This is an Operating System on which the Raspberry Pi board gives us the desired output. At first, they made the audience familiarize with the Raspberry-Pi version 3 model's hardware. After the installation, they both executed some simple programs on Raspberry-Pi via its operating system.

On the 5th March 2022, the workshop was held under the direction of Prof. Leena Patil. It began at 11:30 a.m. at the Antenna and Microwave Lab, with 30 students and some TSX volunteers in attendance. Our student Convener, Mr. Spencer Lobo begin the workshop with a brief introduction of our guest speaker, Mr. Alister D'Silva.

The session was divided into two parts, one covering the theoretical prospect and the other covering the practical session. The speaker began the seminar by discussing the engineering branch priorities in the past and now. He explained the concept of Industry 4.0 and exclaimed how today's world's needs are being worked upon with the help of 'Smart Things.' He further went on to say the domains in which today's automation industry work like Cloud Computing, Big-Data Analytics, Smart Cities, etc. The speaker then offered an overview of Raspberry-Pi (Version 3) and described its various interfaces and how people started using it for industrial purpose. He further compared the two most popular boards, Arduino and Raspberry-Pi and showed how the latter has more advantages than the latter.

Following the break, the speaker informed the audience, the right way to select a Raspberry-Pi based projects. Then he emphasized that even though the project works, one should always display a dashboard. A dashboard is a visual live display of all the data while executing a project. He shared his project's few examples like Vatturkar Industrial and Coca-Cola. He exclaimed that the main and the most advantageous use of any Raspberry-Pi is in IoT (Internet of Things) and Networking.

The speaker then explained about the MQTT protocol and the Publisher-Subscriber (Pub-Sub) Communication Technique in IoT. Additionally, he helped the participants to create a simple dashboard based on MQTT on Node-Red. The session was ended with a Vote of Thanks from Mr. Spencer Lobo and everyone clicked a group picture as this was the first successful offline workshop of TSX as well as of XIE.

CONCLUSION:

The session covered the important aspects of Raspberry-Pi its application. The speaker assured the students who shared their idea of their mini projects based on Raspberry-Pi.

EVENT POSTER:

XAVIER INSTITUTE OF ENGINEERING
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TSX

Telecommunication Society of Xavierites
Presents
A Workshop on

Raspberry Pi



**Mr. Alister D'Silva**
Director Absolute
Motion Pvt Ltd



Saturday 05.03.2022

EVENT IMAGES:







FEEDBACK

The feedback of the event was genuinely positive and everyone enjoyed the workshop. The participants have a huge regard for the speaker and responded saying to keep conducting workshops like these. Some ideas the participants suggested is the longer duration and also more programming related applications.