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INTERNET OF THINGS (IoT) TRAINING FOR STUDENTS OF SMK NEGERI 1 TANJUNG SARI, LAMPUNG SELATAN

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Abstract

Internet of Things (IoT) is a technology that is currently busy been discussed recently. With this technology, every device we use have later can be connected to the internet, so it can be controlled from remotely with a smartphone or even with voice commands. As in our homes, there will be many items that are connected by the internet of things, such as refrigerators, lights, tv, house doors and other items. We can control it with our smartphone. This IoT works using relays and NodeMCU as a code store that has been created in the Arduino ide software.

Keywords: Internet of Things, Voice Command, NodeMCU.

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INTRODUCING

Communication technology is a technology that can help humans in communicating with each other and sending information to each other using a special device (Megawaty et al. 2020). Communication technology is probably one of the most common technologies that are widely used in our daily lives (Darwis et al. 2020). Advances in technology have improved the way of conveying information from one place to another more conveniently, quickly and with high accuracy (Setiawansyah, Sulistiani, and Saputra 2020). Some examples included in communication technology include smartphones, emails, fax machines, chat applications, and others.

IoT or Internet of Things is a concept in which various censored devices are interconnected through the internet to collect and transfer data. Such activities are carried out without the help of computers and humans (Ahmad et al. 2018; Kristiawan et al. 2021). The process of data transfer in IoT is carried out with a variety of technologies. For example, such as sensors, QR Codes, to Radio Frequency Identification (RFID) on a device. By connecting various technologies using an internet connection, IoT can facilitate daily life. Because, connected devices can collect and analyze data to perform your commands automatically (Hafidhin et al. 2020; Sintaro, Surahman, and Pranata 2021).

One example of IoT in everyday life is the smart home system, which is the process of automating the operation of a house or building. In addition, you can also find it in business activities. For example, a QR Code in a payment method and a barcode scan method to find out the price of the product. Then, IoT can also be used to collect various data in business processes. For example, customer activity data, machine performance, and product stock movements. The data will be processed into insights that help make decisions in business. For example, for the development of features that support user experience and decisions in new product innovations.

The Internet of Things (IoT) is one of the new trends in the world of technology that is likely to be one of the great things in the future. IoT is a concept that aims to expand the benefits of continuously connected internet connectivity. IoT can combine physical and virtual objects through the exploitation of data capture and

communication capabilities. Simply put, with IoT physical objects in the real world can communicate with each other by using the help of the network and the internet. (S ACHMAD · 2015). With this IoT, it is very beneficial for all of us because we are able to remotely control the conditions of our homes. With this we as lecturers and electrical engineering teams and Students of the University of Teknokrat Indonesian. invite students to get to know what IoT is so that we all know the use of IoT in our environment.

IMPLEMENTATION METHODS

Place and Time

SMKN 1 Tanjung Sari, Lampung Selatan. Thursday, March 17, 2022

Target Audience

Our main target is the students of SMKN 1 Tanjung Sari, South Lampung

Community Dedication

Methods of implementing community service, namely: first, preparation. The preparatory stage includes:

1. Administration.
2. Coordination with the target audience (principal of SMKN 1 Sukadana)
3. Preparation of service activity materials.
4. Preparation of speakers.
5. Preparation of the time and place of implementation of activities.
6. Last check.

The Second Stage of implementation.

1. Implementation of activities in the form of socialization with the title: internet of things (iot) training for students of SMK-N 1 Tanjung Sari, South Lampung
2. With the main target audience of students of SMKN 1 Tanjung Sari by increasing understanding of IoT. All three program evaluations.
3. The evaluation of the program in question includes: evaluation of the understanding of students related to IoT and the use of IoT around us.

Partner Participation

In the participation of the school, the principal and teachers are very supportive of the holding of IoT training for their students and the enthusiasm of the students is very excited in this IoT training.

RESULTS AND DISCUSSIONS

Details of Visiting Activities The following is a detailed table of visit activities in the implementation of service to students of SMKN 1 Tanjung Sari, South Lampung

Number	Activities	January	February	March
1	Site surveys, management and discussions with partner management	x		
2	Discussions and interviews of the service team for the preparation of the speaker	x		
3	Designing IoT materials and explanations		x	
4	IoT training activities and writing activity reports			x

Expertise of the Proposing Team and Job Description the following is a job description on the implementation of the community service program carried out by SMKN 1 Tanjung Sari, South Lampung

Number	Types of Expertise Description	Pakar
1	Explaining the Importance of IoT Systems and their utilization	1. Jaka Persada Sembiring, S.Kom., M.Cs 2. Akhmad Jayadi, S.Kom., M.Cs.

From the socialization of the community service program, the result is that the enthusiasm of the students is very high, their curiosity is very passionate and they are very active in getting to know IoT.

Figure 1. IoT Material Delivery

Figure 2. IoT training

Figure 3. IoT Material Delivery

Figure 4. IoT training

Figure 5. IoT Practices

Figure 6. IoT conclusions

CONCLUSION

Service activities that have been carried out in the form of delivering material and assistance regarding IoT training are very good for students. considering that now IoT has begun to be discussed a lot about its technology which is very beneficial for the wider community.

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We also express our gratitude to the Indonesian Technocrat University for supporting this activity and the community service team who have been involved together in carrying out community service activities. Not to forget, we also express our gratitude to the principal of SMKN 1 Tanjung Sari who is willing to accept a team for IoT training and as a place for activities to be carried out and all parties who have helped carry out this community service activity. We realize that this service activity is far from perfect and there are still many obstacles encountered in the field. Therefore, we really hope that the activities as a follow-up to this program can be felt more broadly by all levels of society and students

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