Social Media Analysis Training for Digital Talent Development in Indonesia

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INTRODUCTION

Along with the development of interaction in the digital world and information technology, it is necessary to have human resources who can be adaptive to face these developments. The human resources needed are expected to have the ability to adapt to digital technology, in order to compete and develop in this millennial era [1]. There are efforts that have been carried out by the Government, such as conducting Digital Talent Scholarship training for various levels of education through the Digital Talent Scholarship Kominfo website. The types of training provided also vary, such as Fresh Graduate Academy, Vocational School Graduate Academy, Thematic Academy, Professional Academy, Government Transformation Academy, Digital Entrepreneurship Academy, Digital Leadership Academy, and Talent Scouting Academy [2]. However, there is no program that focuses on SMA/SMK/MA students, especially SMA/SMK/MA in East Java. Based on Basic Education Data from the Ministry of Education and Culture, it is known that the number of schools in East Java reached 2980. This shows that the potential of digital talents in East Java is very high and there needs to be a program that accelerates it [3].

In line with the government's program to improve Digital Talents in Indonesia, where in...
the midst of the high pace of increasing digital talent demand of 9 million digital talents by 2030[4], Telkom Surabaya IT Campus created the ITTS Academy program to facilitate the training needed by students and teachers of high school / vocational / MA equivalent in East Java. Currently, there is no campus or institution that can facilitate this, even though many parties in almost every area of human life are beginning to realize the great benefits of this data growth, especially data on social media. With Social Media Analysis, the process of retrieving knowledge or insights from social media data is an opportunity that can be maximized, especially if you want to know opinions, the latest trends, or actors that influence information disseminated through the internet.

This training program is in line with the Roadmap Plan owned by the SISCOM Research Group at the Faculty of Information Technology and Business, IT Telkom Surabaya, where there is a big topic of Business & Management research, with a sub-topic of research on the application of digital transformation. It is hoped that with this program, the government's plan to increase Digital Talent in Indonesia will be achieved, which can be started from students and teachers of high school / vocational / MA equivalent.

The output produced from this training is in accordance with the aspects and priorities of existing problems, namely social, economic, and environmental aspects with the following details.

1.1 Economic aspects

Social media analysis training activities to support economic empowerment arise from the problem of not optimal use of data on the internet, especially social media data.

1.2 Social aspect

Training and mentoring in social media data analysis are provided to provide partner knowledge and skills. With this training, it is hoped that it can increase the spirit of digitalization from high school students and teachers equally.

1.3 Environmental aspects

The social media analysis training provided supports environmental aspects because of environmental limitations that support the younger generation to have data analysis skills.

METHOD

Based on the problems faced by partners, the Proposal Team provides solutions to overcome problems in accordance with the priority aspects previously described. The methods of solving the problem are:

1. Solve problems with Social Media Analysis Training

Currently, the digital skills possessed by equivalent SMA/SMK/MA students are still low. Of course, in the long run, this is a weakness, because along with technological developments, the industry needs prospective talents who have the ability to adapt to the technology available today, such as data processing, especially data on social media. Data processing on social media that has been carried out in this training uses Social Network Analysis and Text Mining methods. Social Network Analysis (SNA) is a method for understanding the relationships between social entities in data, describing their behavior, and their impact on the network as a whole over time [5]. SNA methods have been commonly used in analyzing data in various sectors, including in the fields of health [6], agriculture [7], and politics[8]. Furthermore, the second method applied in this training, Text Mining, can be defined as the process of analyzing text to extract useful or important information for a specific purpose [9]. Bag-of-words (BoW) is a method of representation in natural language processing that captures the occurrence and frequency of words in a document [10]. This allows the analysis and extraction of information from text in a way that algorithms can process. BoW helps address unstructured datasets that are text, enabling automated processing for purposes such as document classification, sentiment analysis, and topic grouping. By translating text into numerical representations, BoW facilitates the use of mathematical and statistical methods in text mining. Text mining consists of a series of processes. The first step of text mining is to collect data in
the form of text that can be taken from news portals, tweets, magazines, and other media. This data in the form of text will go through a series of preprocesses, namely tokenization, removal of stopwords, and search for basic words [11]. Furthermore, from this data will be generated features which will be selected to determine important features and in accordance with what is desired. This feature will be used for applications such as Information retrieval, Information Extraction, Summarization, and Topic Discovery. The purpose of this introduction to text mining is that in addition to participants being able to find out examples of applications, participants will also get to know the challenges that will be faced in everyday life [12].

Text mining conducted in this training will focus on the topic of sentiment analysis. Sentiment Analysis is a method of extracting knowledge and analyzing the emotional tendencies present in the text. In this case, the knowledge to be obtained is the opinions expressed by the user on various topics: politics, religion, economics, business, and so on [13]. The methods used for sentiment analysis can be as diverse as Naive Bayes [14], K-Means [15], and SVM [16].

The case study we took in this training was about the viral movie "Barbie." With the Social Network Analysis method, a business can find out to understand the interaction patterns related to their brand or product on social media [17]. Meanwhile, with Sentiment Analysis, a business can analyze public opinion and satisfaction related to their product or brand [18]. Hopefully, this can help a business in making decisions and determining future strategies not based on assumptions alone but based on data in the community.

2. Digital Talent Coaching
Teachers and high school students who already have the ability to analyze data will be collected in a community so that they can continue to follow digital developments and new methods.
Figure 1. Social Media Analysis Training for High School Students and Teachers

In the future, we will continue to hold other trainings to improve digitalization, especially for the younger generation in Indonesia.

CONCLUSION

Data Analytics is a competency needed by the younger generation in Indonesia to be able to utilize data in the decision-making process. Therefore, we carry out Social Media Analysis Training to provide skills for teachers and high school students of the same level in East Java so that they can prepare the younger generation who are competent in conducting data analysis, especially on social media data.

SUGGESTION

Social Media Analysis training can be an ongoing program using various data analysis methods that keep up with the times.

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BIBLIOGRAPHY


