DATA SCIENTIST CERTIFICATION GUIDANCE FOR SENIOR HIGH SCHOOL AND UNIVERSITY STUDENTS

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ABSTRACT

The importance of using Information and Communication Technology can increase our role in the Modern Era among academics, which is one of the driving factors to be able to compete in the digital world. The use of technology is not only for social media, but the use of technology has an important role in the world of work today. The increasingly rapid development of technology has created many changes and updates in every field. One of the applications most widely used and needed by society is Data Science. Data Science is a multi-disciplinary science that is very widely used in both exact and social fields. To make your job search easier, Data Scientist certification is required. This of course requires someone who is competent in their field. Today's young generations should be worthy of having these competencies. Based on the above, the lecturers at the Faculty of Computer Science, Universitas Mercu Buana contributed to providing a coaching understanding in the application of Information and Communication Technology to increase knowledge in the Modern Era among academics so that they can equip the younger generation to have certification in the field of information technology, especially Data Scientists. This activity or training is a form of concern and is also one of the duties as a lecturer at the Faculty of Computer Science who understands information technology, especially in the field of Data Science.

Keywords: Certification; Competent; Data Scientists; Multi-Disciplinary

ABSTRAK

Pentingnya pemanfaatan Teknologi Informasi dan Komunikasi dapat meningkatkan peran kita di Era Modern di kalangan akademisi, yang menjadi salah satu faktor pendorong untuk dapat bersaing di dunia digital. Pemanfaatan teknologi tidak hanya untuk media sosial saja, namun pemanfaatan teknologi memiliki peran penting dalam dunia kerja saat ini. Perkembangan teknologi yang semakin pesat telah menciptakan banyak perubahan dan pembaharuan di setiap bidang. Salah satu aplikasi yang paling banyak digunakan dan dibutuhkan oleh masyarakat adalah Data Science. Data Science merupakan ilmu multidisiplin yang sangat banyak digunakan baik dalam bidang eksakta maupun sosial. Untuk memudahkan pencarian kerja, diperlukan sertifikasi Data Scientist. Hal ini tentu saja membutuhkan seseorang yang kompeten di bidangnya. Generasi muda saat ini sudah seharusnya layak memiliki kompetensi tersebut. Berdasarkan hal tersebut di atas, para dosen Fakultas Ilmu Komputer Universitas Mercu Buana turut andil dalam memberikan pembekalan pemahaman dalam penerapan Teknologi Informasi dan Komunikasi untuk menambah wawasan di Era Modern di kalangan akademisi sehingga dapat membekali generasi muda untuk memiliki sertifikasi di bidang teknologi informasi khususnya Data Scientist. Kegiatan atau pelatihan ini merupakan salah satu bentuk kepedulian dan juga merupakan salah satu tugas sebagai seorang dosen Fakultas Ilmu Komputer yang memahami teknologi informasi khususnya bidang Data Science.

Kata Kunci: Sertifikasi; Kompetensi; Sains Data; Multi-Disiplin Ilmu

1.   INTRODUCTION

Penang Island is the second smallest state in Malaysia, after Perlis, but in terms of population density, it ranks first. This country also has the lowest percentage of Muslim and Malay populations among other states in Malaysia. The name Penang Island comes from the name of a tree, namely the Penang tree, which was previously found on the island of Penang. Penang Island is a state in Malaysia which consists of two regions, namely the Penang Island region in the west with an area of 293 km² and the eastern region which is located on the west coast of the Malaysian peninsula with an area of 760 km². This island was opened by Francis Light in 1786. Penang Island is one of the most developed and richest countries in Malaysia.

It turns out that Penang Island has many Indonesians living there. They created an association called PERMAI. PERMAI Penang is an abbreviation of Indonesian Community Organization in Penang Island, Malaysia. An NGO or non-governmental non-political organization operating in the social, educational and cultural fields. PERMAI members or experts consist of Indonesian people who live in Malaysia, including: workers, expatriates, lecturers, teachers, students and students. PERMAI tries to become an incubator to give birth to a community that has skills and abilities special skills to be able to get a job in a position and salary that is higher or at least equivalent to other nations.

In order to provide opportunities for Indonesian children who are migrating and working in Penang, Malaysia to gain access to educational facilities, PERMAI Penang organizes a guidance studio program which is also known as the PERMAI Guidance Studio (SB). The PERMAI Guidance Studio was established for the first time on May 2 2021. This initiative has even developed by establishing another PERMAI Kulim Guidance Studio in Negeri Kedah, Malaysia in 2022. The Sanggar Guidance (SB) program covers various levels starting from Kinder Garten. -Children (TK), Elementary School (SD), to Junior High School (SMP) as well as for starting reading-writing-numeracy (calistung).

A Non-Political, Non-Governmental NGO which operates in the field of Social Education and Culture. Experts consist of Indonesian people who live in Malaysia, including: expatriates, business people, lecturers, teachers, students, students and workers who live in Malaysia. As foreigners, people with a humble and friendly attitude are willing to mingle with the initiative of fostering virtue and harmony between Indonesian society and local society through interaction, tolerance, adaptation and contribution without considering the origin of race, nation, belief and religion.

Expert of PERMAI consists of a community from various levels of society from all corners of Indonesia with different backgrounds. Efforts are made to create synergy, giving excess to what is lacking. The strong helps the weak. Those who are good at teaching are still laypeople. This is solely to help and support the government in serving the good of the community. PERMAI also seeks to collaborate with parties who are willing to synergize/transfer knowledge in the fields of eCommerce, Fintech, Digital Technology and other appropriate special skills to establish socio-cultural cooperative relations between the people of Indonesia and Malaysia.

PERMAI strives to be an incubator to give birth to a community that has special skills and abilities so that they can get jobs in positions and salaries that are higher or at least equal to other nations. As an Ambassador of the Nation abroad, he continues to maintain/preserve Indonesian culture and national identity, the Indonesian Constitution which is based on Pancasila. However, we do not ignore and continue to uphold the Constitution and regulations in force in Malaysia. Don't forget the message of the proverb of our ancestors, "where the ground is stepped on, there the sky is upheld."

The process of processing data is very important in companies (Buenaño-Fernández et al., 2019). Through company data, you can obtain useful information. of course, this can be achieved by using appropriate methods (Nurul Hikmah & Habibi, 2023). The task of processing and analyzing data is carried out by data practitioners such as Data Analysts, Data Scientists, and others (Malombe

Mwinzi et al., 2022). Companies from any industrial sector will rely on data as a guide in determining their next business strategy (Nikmatun & Waspada, 2019). The data used must also be relevant to the information you want to know (Žižka et al., 2020). Therefore, companies must support a good data storage system to facilitate the analysis process (Zhao & Yonghua Cen, 2015).

2. THE METHODS

Implementation Stages:

1. The initial meeting via Zoom between KKRPM and the Head of LPPM, and the Team was held on November 16, 2023. The output of this stage is the Summary of LPPM Direction Results (Keputusan Menteri Pendidikan Kebudayaan Riset dan Teknologi, 2023).

2. The initial meeting via Zoom between the PKM Team, PERMAI Partners, and the Head of LPPM was held on December 6, 2023. The output of this stage is clear information about the needs of PERMAI partners.

3. Identifying data needed for knowledge transfer, learning, and training (Brownlee, 2020).

4. The training is carried out with two methods (Kominfo, 2020):

   1). Presentation: The material presented is:

      a. Introduction
      b. Related Work
      c. Case Studies
      d. Pros & Cons

   2). Questions and Answers Participants are given the opportunity to ask questions or discuss about the Data Science (Direktorat Jenderal Pendidikan Tinggi Riset dan Teknologi, 2023).

5. The preparatory steps to carry out this program include:

      a. Survey of the place of the activity
      b. Making a proposal for community service activities
      c. Making the module that will be distributed to the participants

6. This activity will be carried out at Penang Island offline.

7. The evaluation will be conducted at the end of the activity where the participants will be asked to answer questions. Participants can be assessed whether or not they already understand the material that has been given.

3. THE RESULTS

Community service activities were carried out on January 29 2024 in Georgetown, Malaysia. This activity was organized by 3 faculties, namely the Faculty of Computer Science, the Faculty of Engineering, and the Faculty of Design and Creative Arts and was attended by participants from groups of Indonesian workers who work in Penang, Malaysia as seen in Figure 1 dan Figure 2.

Figure 1 Lecturers and Training Participants Singing the Song Indonesia Raya

Figure 2 Participants, Committee and Lecturers of Universitas Mercu Buana During the Closing

A very simple Data Scientist training for Indonesian students and workers in Penang, Malaysia, has been carried out with around 25 participants. Most of the participants are Indonesian citizens domiciled in Penang. These participants come from various backgrounds, both as workers in Penang and as micro-entrepreneurs. Indonesian citizens in Penang who participated in the training activities carried out by the Mercu Buana University lecturer team were very enthusiastic about participating in this activity. Those who have lived in Penang for a long time and some have been there for decades. The training participants actually want to be able to return to their hometowns after no longer working in Penang and want to have their own businesses.

4. CONCLUSION

Computer Sciece, Universitas Mercu Buana has completed its Community Service activities on Penang Island. The activity was attended by around 25 participants who are Indonesian citizens domiciled in Penang. As expected, the implementation of this PkM activity went smoothly. In this activity, good coordination between LPPM Universitas Mercu Buana and Permai Malaysia was

Yaya Sudarya Triana[1*], Rahmat Budiarto[2], Khozaeni Bin Rahmad[3]

very helpful. Participants played a very active role in participating in this activity. Several participants felt the need to get more complete material and they were interested in this new activity, then asked for this activity to be carried out routinely.

5. AKNOWLEDGEMENT

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