

MELAKA
INTERNATIONAL
INTELLECTUAL EXPOSITION

MIIEX'24

12 JUNE '24

Dewan Taming Sari,
Universiti Teknologi MARA Caw. Melaka,
Kampus Alor Gajah, Melaka

*"Empowerment of Special
Needs through Invention
& Innovation"*

**EXTENDED
ABSTRACT**

MiiEX'2024

MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION 2024

**“EMPOWERMENT OF SPECIAL NEEDS THROUGH INVENTION AND
INNOVATION”**

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UiTM Cawangan Melaka

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78000 Alor Gajah

Melaka Bandaraya Bersejarah

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MiiEX'2024

MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION 2024

“EMPOWERMENT OF SPECIAL NEEDS THROUGH INVENTION AND
INNOVATION”

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INNOVATION, INVENTION, AND DESIGN

FOREWORD BY THE RECTOR OF UiTM CAWANGAN MELAKA



Professor Ts. Dr. Mohd Rasdi bin Zaidi

Rector, Universiti Teknologi MARA (UiTM)

Cawangan Melaka

Welcome to the Melaka International Intellectual Exposition 2024 (MIIEX '24). It is an honour for me, on behalf of UiTM Cawangan Melaka, to thank all of you for joining MIIEX '24. We are proud to inform you that this is the 13th consecutive year that UiTM Cawangan Melaka is organizing this exposition. Since 2009, UiTM Cawangan Melaka has successfully hosted this innovation exposition. Not only have we succeeded in organizing the exposition, but we have also successfully embarked on commercialized products.

2024 is a special year where MIIEX 2024 emphasizes the development of special needs. As we know, special needs indicate a limitation in a person's ability to engage in and benefit from various aspects, such as daily activities and education. Hence, with the theme "Empowering Special Needs Through Invention and Innovation," it is a platform for industries, professionals, academicians, students, and communities to share their innovative ideas and products to increase accessibility for those with special needs.

The successful implementation of MIIEX '24 is our joint success. This event was supported by the Melaka state government through YB Datuk Fairul Nizam bin Roslan, the EXCO of Science, Technology, Innovation, and Digital Communication. I also want to express my

gratitude to Universitas Negeri Padang, Indonesia, Universitas Muhammadiyah, Makassar, Indonesia, the International Association of Economic and Businesses (IAEB), Universiti Sains Islam Malaysia, Ibnu Umami Maktum Research Center (UMMI), USIM, and The Southeast Asia Minister of Education Organization Regional Centre for Special Educational Needs (SEAMEO SEN) as our co-collaborators for MIIEX 2024.

The collaboration from various parties in MIIEX '24 is a platform that will improve cooperation and interweaving among industries, professionals, academicians, students, and communities in shaping their potential in developing innovation products. This exposition also serves as a platform to cultivate and uphold the nation's innovation culture by presenting new ideas and research by young people, especially from academia and universities. Indirectly, MIIEX '24 will encourage all inventors towards empowering Science, Technology, Engineering, and Mathematics (STEM), especially in primary and secondary schools.

The new digital landscape also inspires more innovation and new ideas that contribute to various activities, such as business and industries. As a university that encourages "Research and Innovation," we aim to foster more innovative products that benefit scholars, industries, and communities, addressing issues to improve our present and future life.

This exposition would never happen without dedication, teamwork, and commitment. A round of applause should be given to the committee teams, who are the backbone of this exposition. Their hard work, effort, and time made this exposition possible.

Finally, I would like to conclude this brief remark by thanking all the participants and stakeholders for joining the exposition. We hope that this collaboration never ends here.

Thank you.

FOREWORD BY THE DEPUTY RECTOR (RESEARCH & INDUSTRIAL LINKAGES)



Associate Professor. Dr. Nur Hayati binti Abd Rahman

Deputy Rector (Research & Industrial Linkages), Universiti Teknologi MARA (UiTM) Cawangan Melaka

With much passion and privilege, let me warmly welcome all of you to the Melaka International Innovation Exhibition (MIIEEX), UiTM Cawangan Melaka's flagship event. I firmly believe that events such as these demonstrate the gradual evolution of this platform in terms of its significance and its governing principles within the sphere of learning and the broader scholarly society.

The theme for this year, "Empowering Special Needs Through Invention and Innovation," strongly connects to our mission of using research and technology to make a positive impact on the world we live in. Besides enforcing the message of diversity, this theme also reaffirms our focus on creating products to improve the lives of people with disabilities (PWDs). Such innovations are vital as only through focused constructive changes can society become more sensitive to the needs of all members.

MIIEEX allows researchers, students, and industry professionals to come together, share their innovative research, and develop viable research partnerships. It has been great to see the enthusiasm of the participants and the efforts they put into their projects, which can offer various social and economic benefits. This is why one can state that MIIEEX is a great

opportunity for creating connections between the academic environment and industry, facilitating the implementation of innovative and promising projects.

Finally, I would like to express my sincere appreciation to all the members and supporters of the organizing committee, all the participants, sponsors, and everyone involved in preparing this event. I want to express my gratitude for your commitment and involvement, as the success of MIIEX and the development of an active culture of innovation in our university and beyond is partly owed to your support.

Thank you

FOREWORD BY THE PROJECT DIRECTOR



Dr Zulkefli bin Muhamad Hanapiyah

Senior Lecturer

Assalamualaikum and Warmest Greetings,

It gives me a great pleasure, on behalf of the organizing committee, to welcome all participants and speakers to the Melaka International Intellectual Exposition 2024 (MIIEX '24) with the theme "Empowering Special Needs Through Invention and Innovation." We are honoured and pleased to welcome all participants to this biennial event.

MIIEX '24 is a platform that gathers experts from local and international industries, academia, scientists, researchers, and the community to contribute to the advancement of scientific and technological knowledge. This knowledge helps develop disruptive innovation products that improve daily activities for businesses and the community, especially those with special needs.

MIIEX '24 provides an atmosphere for inventors of all levels to gain new exposure and collaborate. Indirectly, this promotes a collaborative and innovative culture that focuses on cutting-edge technologies and new standards in technology and creativity.

MIIEX '24 is anticipated to serve as an arena for participants to acquire and disseminate revolutionary information on ideas and innovation. It is intended that the competition will expose the contestants' minds to the latest technologies and designs, aligning with the government's goal of encouraging innovation in Malaysia.

Finally, I want to compliment my fellow committee members on their amazing efforts, which were vital to the event's success. In addition, I want to thank our co-organizers, event sponsors, and participants. Optimistically, we hope that all new knowledge discovered, invented, or innovated will lead us toward future sustainability.

Thank you.

**FOREWORD BY MELAKA STATE EXCO OF SCIENCE, TECHNOLOGY,
INNOVATION AND DIGITAL COMMUNICATIONS**



YB Datuk Fairul Nizam bin Roslan

Melaka State Exco of Science, Technology, Innovation and Digital Communications

Welcome to the Melaka International Intellectual Exposition 2024 (MIIEX '24). It is an honor for me, on behalf of UiTM Cawangan Melaka, to thank all of you for joining MIIEX '24. We are proud to inform you that this is the 13th consecutive year that UiTM Cawangan Melaka is organizing this exposition. Since 2009, UiTM Cawangan Melaka has successfully hosted this innovation exposition. Not only have we succeeded in organizing the exposition, but we have also successfully embarked on commercialized products.

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Thank you.

MIIEX'24 ORGANISING COMMITTEE

COMMITTEE	NAME
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	AFZAN SAHILLA BINTI MOHD AMIR HAMZAH
	MUHAMMAD FURQAN BIN AZHAR
	KHAIRUL AZHAR BIN LOCHMAN

ABOUT MIIEX'24

MIIEX'24 is an innovation competition annually organised by UiTM Melaka with the intention to bring together ideas and inspiration that could fit in for commercialization needs.

This event creates a platform for researchers to establish networking, partnership and opportunities to collaborate with industries.

OBJECTIVES

1. Encourage and instil passion towards inventing and innovating among UiTM Cawangan Melaka staff, students and academicians of local and international higher education institutions;
2. Highlight distinguished talents of skilful inventors and exhibit intellectual products, inventions and innovations among local and private tertiary institutions, government and private agencies, including international participants;
3. Become an effective Business Matching platform for participating research products, matching industries and partnering government agencies;
4. Recognise, inspire and promote invention and innovation products to be patented and commercialized;
5. Increase passion towards inventing and innovating through research and boost interests of government and non-government agencies to obtain consultancy services from a line up experts of higher education institutions and UiTM Cawangan Melaka.

THEME

'EMPOWERMENT OF SPECIAL NEEDS THROUGH INVENTION AND INNOVATION'

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Bantu Oku Applications

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Abstract

A variety of disabilities or disorders, each unique to them, might affect individuals. For example, some people are deaf, some are blind, some people are missing their legs, and some people are missing their arms. Because of the disability categories, the vast majority of disabled people are dependent on their parents or guardians. Sometimes, the parents or guardians desire relief from these responsibilities. Our mobile application will cover a potential solution for these issues. We will strive to inform these impaired individuals about our suggested mobile application. Quality of life will improve for disabled people and their caregivers. A smartphone app called Bantu OKU was created with the intention of empowering and supporting the OKU (Disabled Persons) community, which is made up of people with disabilities. The owner of this application is MiracleTech Enterprise. The application seeks to offer a comprehensive platform that makes it easier to access necessary resources, services, and support systems. Bantu OKU Applications includes three services. Our services include medical assistance, e-hailing, and service assistance. Our company's plan is to assist disabled people with their everyday tasks. In addition, we hope that using our applications will enable everyone to make money. Through our application, Bantu OKU, we have not only helped them make more money, but we have also given them a platform that opens up new opportunities for growth or the ability to earn a living in a way that better supports their goals and choices in life.

Keywords: Bantu OKU, Applications, Disable, Special

1. INTRODUCTION

A mobile application is a software that bundles together certain features in a way that is accessible to all users including disabled persons According to Lane, Miluzzo, Peebles, Choudhury and Campbell (2010), most smart phones and mobile phones on the market today are equipped with

a number of sensors, including a microphone, camera, speaker, digital compass, accelerometer, and others. As a result of these sensors, a great deal of software is developed by programmers. There are millions of apps on both the App Store and Android app stores. Applications are the foundation of the mobile economy. But what we can see now is that most of the applications in the App Store or Android Store are now less focused on the use of people with disabilities (*Disability and Health Disability Barriers* | CDC, 2024). Most of the apps available today only give advantages to physically perfect people (*Disability and Health Disability Barriers* | CDC, 2019). Therefore, we found a way to conclude disable people in this society by coming up with a mobile application that have services like E-hailing services, service assistance and medical services.

2. OBJECTIVE

We intend to let the customers feel easier for users who use our application, especially disabled people. Our goal by creating this BANTU OKU application is to make it easier for the disabled person with their daily activities and at the same time to help those who do not have a job in generating income by using our application. In addition, this application also can help everyone to generate income by making the application we design as a side job.

3. NOVELTY & INVENTIVENESS

Our goal while developing new product is to simplify the user experience. We take action to develop apps that are influenced by some of the ones that are currently available in the Android App Store or App Store. Like Grab and MySejahtera, for instance. Nevertheless, we combine the two apps into a single app that offers the services offered by Grab and MySejahtera. However, we only focus on disabled person with their daily life activities. The services we provide is E-Hailing services, assistance services and medical assistance services.

4. PRACTICALITY AND USEFULNESS

Our disability applications are game-changing resources that revolutionize inclusion, independence, and accessibility for people with disabilities. These apps, which are customized to meet a variety of needs, come with a wide range of features, including E-hailing services, medical services and assistant services. Disability apps enable users to navigate the world more independently by giving them access to resources, communication channels, and information so they can stand on their own feet without asking for help from others. This lowers barriers to social, professional, and educational activities. In addition, they create a feeling of belonging and community, which makes it possible for people with disabilities to talk about their experiences, get support from their peers, and fight for their rights. Disability apps are essential for fostering equality, autonomy, and empowerment for individuals with diverse abilities, whether they are used for improving communication, managing health, or assisting in skill development.

5. CONCLUSION

In summary, our applications do help disabled people who are in need so they can survive this world without having to rely on other people too much. These kinds of disability applications are an incredible technological development that have significantly improved the lives of people with disabilities. The features and functionality of disability apps will advance along with technology, offering even more chances for equality and empowerment for individuals with disabilities. In this kind of era, it is such a crucial thing to make disabled people feel confined in this daily environment, so the existence of these applications will help to improve our society.

REFERENCES

Disability and Health Disability Barriers | CDC. (2019, September 4). Centers for Disease Control and Prevention. <https://www.cdc.gov/ncbddd/disabilityandhealth/disability-barriers.html>

Disability and Health Disability Barriers | CDC. (2024, May 2). Centers for Disease Control and Prevention. <https://www.cdc.gov/ncbddd/disabilityandhealth/disability-barriers.html>

Lane, N. D., Miluzzo, E., Lu, H., Peebles, D., Choudhury, T., & Campbell, A. T. (2010). A survey of mobile phone sensing. *IEEE Communications magazine*, 48(9), 140-150.