

EXTENDED ABSTRACT

MiiEX'2024

MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION 2024 "EMPOWEREMENT OF SPECIAL NEEDS THROUGH INVENTION AND INNOVATION"

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MiiEX'2024

MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION 2024 "EMPOWEREMENT OF SPECIAL NEEDS THROUGH INVENTION AND INNOVATION"

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FOREWORD BY THE PROJECT DIRECTOR

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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 Ummi 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 (MIIEX), 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.

MIIEX 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 MIIEX 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

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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.

MIIEX'24 ORGANISING COMMITTEE

COMMITTEE	NAME
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i.	

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	FAIQAH HAFIDZAH BINTI HALIM
	NORSHAHIDATUL HASANA BINTI ISHAK
	HAZRATI ZAINI
	KHAIRUL NURMAZIANNA ISMAIL
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PROGRAM BOOK, ABSTRACT &	DR MAIMUNAH JOHARI
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	PN NOR HALAWAH AHMAD
	PN AZIRA RAHIM
	NORLINDA TENDOT ABU BAKAR
	AFZAN SHAHILLA AMIR HAMZAH
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	MASLIZA BINTI MOHD RAZALI
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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

- 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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Disability People: AbilityFin

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Abstract

AbilityFin is a groundbreaking tool that enhances the banking experience for visually impaired

individuals. AbilityFin, which is integrated into online banking platforms, offers special

budgeting options to blind customers. AbilityFin's voice command features allow visually

impaired persons to properly manage their money and attain financial independence. This

abstract focuses on AbilityFin's core characteristics, specifically accessibility, security, and

privacy. By adopting AbilityFin, financial institutions encourage inclusion and equal opportunity

for visually impaired people, improving the banking experience and empowering blind

customers.

Keywords: AbilityFin, visually impaired, online banking, budgeting, accessibility, security,

financial independence.

1.0 INTRODUCTION

Disability is part of being human and is integral to the human experience. It results from the

interaction between health conditions such as dementia, blindness, or spinal cord injury, and a

range of environmental and personal factors (World Health Organization, 2023). According to

OHCHR, persons with disabilities face barriers in all aspects of their daily lives like lack of

communication, easily getting injuries and abuse, lack of information, and difficulty engaging

within a community. However, many products and services have been removed or reduced for

people with disabilities to become more independent and involved in this world. So, AbilityFin

is one of the budgeting tools that will help blind people manage their money and easily use online

transfers in their daily lives.

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2. OBJECTIVE

AbilityFin aims to provide a comprehensive and user-friendly solution for blind or visually impaired individuals that can enable them to effectively manage their budgets. This template provides a range of specialized budgeting options tailored to meet the unique needs of blind users. By leveraging cutting-edge technology, AbilityFin empowers them by offering intuitive and accessible features that cater to their specific needs. Through its user-friendly and voice command capabilities, AbilityFin enables users to effortlessly track their expenses, set financial goals, and make informed financial decisions. Our goal is to enhance financial independence and improve the overall quality of life for them ensuring that they have the tools and resources they need to confidently manage their finances.

3. NOVELTY & INVENTIVENESS

AbilityFin created voice commands and accessible authentication techniques such as voice recognition and biometric data specifically to help visually impaired persons handle their finances without difficulty.

4. PRACTICALITY & USEFULNESS

AbilityFin's app is a groundbreaking solution tailored to meet the unique needs of visually impaired individuals, marking a significant advancement in financial accessibility and security. Through advanced features like voice commands, voice recognition, and biometric data, the app seamlessly connects users to their finances, empowering them with real-time access to account balances. This proactive approach enhances financial literacy and fosters confidence, while also serving as a powerful tool to prevent exploitation and fraud. By prioritizing accessibility and security, AbilityFin's app not only revolutionizes financial management for the visually impaired but also champions inclusivity and societal change, empowering users to navigate their financial futures with assurance and independence. AbilityFin's app offers a comprehensive solution for visually impaired individuals, including a unique expense tracking feature. Through intuitive voice commands, users can effortlessly log and monitor their daily expenses, while also setting

limits to stay within their budgets. Based on The Banker "Financial services failing disabled consumer" David Montagner (n.d.), an innovative feature of the app is its ability to utilize previous balance information intelligently. By analyzing past transactions and spending patterns, the app can offer insights and suggestions to help users make informed financial decisions. For example, it can provide alerts when spending exceeds a certain threshold or recommend adjustments to stay within budget based on historical data. Moreover, the app's expense-tracking functionality takes accessibility to the next level. Through intuitive voice commands, users can effortlessly log and monitor their daily expenses. By setting limits and receiving notifications when nearing or surpassing them, users can effectively manage their budgets and maintain financial stability.

5. CONCLUSION

In conclusion, AbilityFin represents a pivotal step forward in enhancing the banking experience for visually impaired individuals. By integrating specialized budgeting options and innovative features like voice commands and biometric authentication, AbilityFin empowers users with accessibility, security, and privacy in managing their finances. This groundbreaking solution not only improves financial independence but also promotes inclusivity and equal opportunity within the banking sector. By adopting AbilityFin, financial institutions demonstrate their commitment to supporting the diverse needs of their customers, ensuring that all individuals, regardless of visual impairment, can confidently navigate their financial futures with ease and independence.

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