

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”**

**Copyright © 2024**

UiTM Cawangan Melaka

KM26 Jalan Lendu,

78000 Alor Gajah

Melaka Bandaraya Bersejarah

Website: <https://vmiiex.uitm.edu.my/>

# MiiEX'2024

**MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION 2024**

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

**EDITORS AND COMPILERS:**

Dr Maimunah Johari

Puan Norlinda Tendot Abu Bakar

Puan Maymunah Ismail

Puan Nor Halawah Ahmad

Cik Afzan Shahilla Amir Hamzah

Puan Azira Rahim

**COVER DESIGN:**

Rashidy Samsudin

Wan Nur Khalisah Shamsudin

Ridzuan Adli bin Azidin

**PUBLISHED BY:**

UiTM Cawangan Melaka

KM26 Jalan Lendu,

78000 Alor Gajah

Melaka Bandaraya Bersejarah

Tel: +606-5582094 / 2190 / 2113

eISBN: 978-967-2846-81-9

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, with permission of the copyright holder.

## **CONTENTS**

**FOREWORD BY THE RECTOR OF UITM CAWANGAN MELAKA**

**FOREWORD BY THE DEPUTY RECTOR (RESEARCH & INDUSTRIAL LINKAGES)**

**FOREWORD BY THE PROJECT DIRECTOR**

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

**MIIEX'24 ORGANISING COMMITTEE**

**ABOUT MIIEX'24**

**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 Umri 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**

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.

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.

## MIIEX'24 ORGANISING COMMITTEE

COMMITTEE	NAME
PATRON	PROFESOR DATUK DR SHAHRIN BIN SAHIB@SAHIBUDDIN VICE CHANCELLOR, UNIVERSITI TEKNOLOGI MARA
CHAIRMAN I	YB DATUK FAIRUL NIZAM BIN ROSLAN MELAKA STATE EXCO OF SCIENCE, TECHNOLOGY, INNOVATION AND DIGITAL COMMUNICATIONS
CHAIRMAN II	PROF TS. DR RASDI BIN ZAINI
ADVISORS	ASSOCIATE PROFESSOR DR. NUR HAYATI BINTI ABD RAHMAN DEPUTY RECTOR (RESEARCH & INDUSTRIAL LINKAGES)  TS. DR NADZRI BIN MOHD SHARIF DEPUTY RECTOR OF STUDENTS AFFAIRS  DR MOHAMMAD NOR AFANDI BIN IBRAHIM DEPUTY RECTOR OF ACADENIC AFFAIRS
PROJECT DIRECTOR	DR ZULKEFLI BIN MUHAMAD HANAPIYAH
DEPUTY PROJECT DIRECTOR I	EN MUHAMMAD FAIRUZ BIN JAMIL
DEPUTY PROJECT DIRECTOR II	PN AINI QAMARIAH BINTI MOHD YUSOF
DEPUTY PROJECT DIRECTOR III	PN WAN HASMAT BINTI WAN HASSAN
SECRETARY	DR MASTURA BINTI RONI
	CIK SURYA AHMAD ROYALI
	PN BAIZURA BINTI BAHARIN
	PN NOOR RAFIDAH BINTI IBRAHIM

TREASURER	PN KHAIRUNNISA YUSOFF
	PN AINUL BASYIRAH BINTI ABDUL RAZAK
	PN RABIAH BINTI IBRAHIM
	PN SITI MUSLIHA BINTI MOHD IDRIS
	CIK NORZAHIDAH BINTI YACOB
PROMOTION	DR FADHLUR RAHIM BIN AZMI
	DR IRFAH NAJIHAH BINTI BASIR MALAN
	DR NORNAJIHAH NADIA BINTI HASBULLAH
CORPORATE AND PROTOCOL	AIDA NUR MOHD KODRI
	MOHAMAD SHAFIEI AYUB
	MOHD ARIFF MUSTAFA
	FAHMI SAMSUDIN
	MOHD HAFIFI MOHD SUPIR
	DR MOHAMAD HAFIFI JAMRI
ICT, HELPDESK & TECHNICAL SUPPORT	DR RAIHAH BINTI AMINUDDIN
	TUAN MUHAMMAD IDRIS IRFAN BIN TUAN MOHD AZAHAR
	RASEEDA BINTI HAMZAH
	TS. DR. NOR AFIRDAUS BINTI ZAINAL ABIDIN
DESIGN & MULTIMEDIA	EN RASHIDY SAMSUDIN
	RIDZUAN ADLI BIN AZIDIN
	WAN NUR KHALISAH SHAMSUDIN
JURY SELECTION AND MANAGEMENT	EN NORAZLAN ANUAL
	PN AFZAN NOR BINTI TALIB
	PN NUR HIDAYAH ZAINI
	CIK FARIHA AIZA BINTI RAMLY
	PN NURUL AIN BINTI MUSTAKIM
	PN NOORZALYLA MOKHTAR
	PN ZATUL HIMMAH BINTI ABDUL KARIM
	CIK MUNA KAMEELAH BINTI SAUID
	PN NOR MASLIA RASLI SAMUDIN
	PN NURHAFIZAH MOHD ZOLKAPLI
	CIK MILFADZHILAH MOHD JAMIL
	PN NUR HAZWANI BINTI MOHAMAD ROSELI
	PN GLADYS SEBI ENTIGAR

	PN NASHRAH BINTI TALIB
	CIK SITI NURUL IZZA HASHIM
REGISTRATION AND PARTICIPATION	DR. SITI FEIRUSZ BINTI AHMAD FESOL
	SITI RAMIZAH JAMA
	SITI NURSYAHIRA ZAINUDIN
	BUSHRA ABDUL HALIM
BIRO MEDAL & CENDERAHATI	PN SYUKURRIAH IDRUS
	SITI NAZIRAH BINTI OMAR
	RAFIDAH ABDUL AZIZ
	MASTURA AYOB
	INTAN LIANA BINTI SUHAIME
	DR NORASHIKIN ADAM
CERTIFICATE	PN ZUHRI ARAFAH BINTI ZULKIFLI
	FAIQAH HAFIDZAH BINTI HALIM
	NORSHAHIDATUL HASANA BINTI ISHAK
	HAZRATI ZAINI
	KHAIRUL NURMAZIANNA ISMAIL
SPONSORSHIP	DR MOHD SYUKRI BIN ABDULLAH
PROGRAM BOOK, ABSTRACT & PUBLICATION	DR MAIMUNAH JOHARI
	PN MAYMUNAH ISMAIL
	PN NOR HALAWAH AHMAD
	PN AZIRA RAHIM
	NORLINDA TENDOT ABU BAKAR
	AFZAN SHAHILLA AMIR HAMZAH
MEDIA & PUBLCITY	DR NOOR AFZALIZA NAZIRA BINTI IBRAHIM
	DR MOHD SUFIEAN BIN HASSAN
	ENCIK KHAIRI BIN KHAIRUDDIN
	DR NUR SHAZANA BINTI ABDUL RANI
	DR SITI NUR IZYANDIYANA BINTI AB HADI
	DR MOHAMAD HAFIFI BIN JAMRI
MEALS ARRANGEMENTS	DR SITI NURUL AKMA BINTI AHMAD
	MOHD SUFIAN AB KADIR
	SITI MARIAM ALI
	ERRATUL SHELA ESHAK
	NUR FAITHZAH JAMIAN

	MUNIRAH BINTI MOHD JIDI
	MASLIZA BINTI MOHD RAZALI
TECHNICAL & VENUE	EN MAZ IZUAN BIN MAZALAN
	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’**

<b>INNOVATION, INVENTION, AND DESIGN</b>	
<b>MIIEX'24 ORGANISING COMMITTEE</b>	<b>9</b>
<b>ORAL HISTORY SYSTEM FOR MEMORY MANAGEMENT (OHS3M)</b>	<b>27</b>
<b>ALIMS – ASSETS LOAN AND INVENTORY MANAGEMENT SYSTEM WITH SMS NOTIFICATION</b>	<b>31</b>
<b>“SOCKET LOCK-IT”: TOOTH EXTRACTION SOCKET COMPRESSION DEVICE FOR SPECIAL NEEDS PATIENTS</b>	<b>36</b>
<b>F.O.S MEMBERSHIP SYSTEM ENHANCEMENT USING GEOLOCATION, CHATBOT WITH USER PREFERENCES</b>	<b>40</b>
<b>CDL-CQI TEMPLATE</b>	<b>44</b>
<b>AIDQR FINANCIAL BRIDGE FOR SPECIAL NEEDS</b>	<b>49</b>
<b>SMART RAKE ROLLER</b>	<b>53</b>
<b>INSUREQUEST: THE INSURANCE ADVENTURE</b>	<b>56</b>
<b>MONEYEASE APP</b>	<b>60</b>
<b>FLEXIWHEEL</b>	<b>64</b>
<b>VIRTUAL REALITY TOOL FOR TEACHING AND LEARNING HUMAN ANATOMY IN SECONDARY SCHOOL</b>	<b>68</b>
<b>ENHANCING CHEMISTRY LEARNING FOR SECONDARY SCHOOLS STUDENTS USING VIRTUAL REALITY</b>	<b>73</b>

<b>THE SUPPORT BOARD: TREATMENT WITHOUT TRANSFER</b>	<b>78</b>
<b>BLIND BANKER APPS</b>	<b>81</b>
<b>GEST2TALK (G2T) APPLICATION</b>	<b>84</b>
<b>ARTHRIEASE KIT</b>	<b>90</b>
<b>REVERZ PRINTER</b>	<b>94</b>
<b>EMPOWERING YOUR FINANCIAL WITH ULTIMATE FINANCIAL COMPANION</b>	<b>98</b>
<b>MY INNER VOICE: AN INNOVATION OF SELF-EXPRESSION</b>	<b>103</b>
<b>WITH THE COMMUNICATION BOOK</b>	<b>103</b>
<b>MIND MAP: INTERROGATIVE WORDS IN MANDARIN</b>	<b>107</b>
<b>AROMAZEN HANDKERCHIEF FOR INDIVIDUALS WITH AUTISM</b>	<b>111</b>
<b>AUTIEASE KIT ULTIMATE COMFORT AND CONVENIENCE SOLUTION</b>	<b>115</b>
<b>MONTESSORI SENSORY SOFTBOOK: ENGAGING EDUCATION FOR CHILDREN WITH AUTISM</b>	<b>119</b>
<b>BRAILLEBIND</b>	<b>122</b>
<b>HEAR TO SEE GLASSES</b>	<b>125</b>
<b>SMART BLIND-PEDESTRIAN TRAFFIC LIGHT AND SMART CANE WITH EARPIECE</b>	<b>128</b>
<b>MONEY BRAILLE STAMPING</b>	<b>130</b>

<b>EMPOWER SHOP INNOVATION</b>	<b>134</b>
<b>SENSORYSERENITY BOTTLE</b>	<b>138</b>
<b>SMART UMBRELLA</b>	<b>147</b>
<b>TAXQUEST</b>	<b>149</b>
<b>SMART MUG</b>	<b>153</b>
<b>FINDR</b>	<b>156</b>
<b>IFROST SMART REFRIGERATOR</b>	<b>159</b>
<b>A SMART CANE INTEGRATED WITH ARTIFICIAL INTELLIGENCE (AI) CAPABILITIES</b>	<b>164</b>
<b>ATTACHABLE ROOF FOR WHEELCHAIR</b>	<b>166</b>
<b>3 IN 1 UTENSILS</b>	<b>170</b>
<b>STUDYMATE: UITM STUDENT TIME MANAGEMENT SYSTEM USING WEB-SCRAPING AND TELEGRAM BOT API WITH AUTOMATIC NOTIFICATION REMINDER</b>	<b>173</b>
<b>EMPOWERING AUTISTIC TALENTS</b>	<b>182</b>
<b>DISABANK IMOBILE</b>	<b>187</b>
<b>COMFORTSTEP DIABETIC FOOTWEAR</b>	<b>192</b>
<b>SNUGGLETRON: A COMPANION ROBOT</b>	<b>194</b>
<b>BUDGETBUDDY: SAVE EASILY, SPEND WISELY</b>	<b>198</b>

<b>EZTOTE BAG</b>	<b>201</b>
<b>BUDGET BUDDY</b>	<b>205</b>
<b>SIGHTLESS SHOP</b>	<b>208</b>
<b>FINWEAR TRANSACTION BRACELET</b>	<b>214</b>
<b>FINWEAR TRANSACTION BRACELET</b>	<b>216</b>
<b>MONEY BUDDY</b>	<b>221</b>
<b>UNIVERSAL GAME CARDS (INVESTMENT EDITION)</b>	<b>225</b>
<b>SMART PEN FOR INTELLECTUAL DISABILITIES</b>	<b>229</b>
<b>GLITZGLAM MAKEUP BRUSH</b>	<b>231</b>
<b>INVENTNIC (INVESTMENT APPLICATION FOR VISUAL IMPAIRMENT)</b>	<b>234</b>
<b>THE SMART BLIND CANE STICK</b>	<b>237</b>
<b>TECHNOLOGICAL INNOVATION:</b>	<b>240</b>
<b>THE FUTURE AND CHALLENGES IN MALAYSIA CONTEXT</b>	<b>240</b>
<b>CHROMATONE</b>	<b>245</b>
<b>SMART MEDICINE DISPENSER</b>	<b>246</b>
<b>HELPHUB</b>	<b>250</b>

<b>CREATING BRIDGES FOR OPPORTUNITIES: DEVELOPING A UNIQUEHIRE.COM FOR PEOPLE WITH DISABILITIES</b>	<b>254</b>
<b>EMPOWER ABILITY APPLICATION</b>	<b>258</b>
<b>3D FLEXY LEG” SILICONE-BASED PROSTHETIC LEG</b>	<b>259</b>
<b>SMART TECH</b>	<b>263</b>
<b>IHEADEASE: INNOVATIVE HEAD IMMOBILISATION DEVICE FOR SPECIAL CARE PATIENTS DURING DENTAL PROCEDURES</b>	<b>266</b>
<b>CHILLI ROW COLLECTOR</b>	<b>270</b>
<b>TRI-WHEEL NAVIGATOR: INNOVATIVE LUGGAGE WITH TRIANGULAR WHEELS</b>	<b>273</b>
<b>PHINESTIC LEARNING</b>	<b>276</b>
<b>SMART ASSISTIVE WATCH FOR THE VISUALLY IMPAIRED</b>	<b>280</b>
<b>OPTICFIN: BANKING SOFTWARE FOR VISUALLY IMPAIRED PEOPLE</b>	<b>283</b>
<b>TWIST N’ TASTE 2-IN-1 BOTTLE</b>	<b>286</b>
<b>THE JIGGLE PILLOW</b>	<b>290</b>
<b>VISIONARY VAULT: REVOLUTIONIZING SOLUTION FOR DISABLE COMMUNITY</b>	<b>292</b>
<b>SAFETY BUBBLY JACKET</b>	<b>300</b>
<b>ADJUSTMENT ON EC METER FOR DISABLE PEOPLE</b>	<b>303</b>

<b>EARBUD TECHNOLOGY FOR THE BLIND</b>	<b>306</b>
<b>LEMMEGUIDE</b>	<b>310</b>
<b>SIGNSYNC</b>	<b>313</b>
<b>ICHAIR - THE NEXT GENERATION IN INTELLIGENT WHEELCHAIR MOBILITY</b>	<b>316</b>
<b>PORTABLE ARMCHAIR CANE</b>	<b>320</b>
<b>SMART INTELLIBOARD</b>	<b>324</b>
<b>MASSAGER WHEELCHAIR</b>	<b>327</b>
<b>VOXTECH: EMPOWERING FINTECH ACCESSIBILITY FOR VISUALLY IMPAIRED</b>	<b>331</b>
<b>TRANSFORMING CORN COBS INTO RENEWABLE COAL: A SUSTAINABLE ALTERNATIVE TO FOSSIL FUELS</b>	<b>336</b>
<b>MULTIPURPOSE KITCHEN TOOL</b>	<b>342</b>
<b>DIGITAL CHOPBOARD</b>	<b>347</b>
<b>GRABBYBITEZ</b>	<b>351</b>
<b>SEEINGSOR SYSTEM DETECTION</b>	<b>354</b>
<b>SAVVY COINS: PERSONAL FORCED SAVINGS TRACKER MOBILE APPLICATIONS</b>	<b>356</b>
<b>CAREMALL</b>	<b>360</b>
<b>TALK TO ME (TTM) ASSISTIVE MACHINE</b>	<b>364</b>

<b>EARSENSE: ENHANCING COMMUNICATION FOR THE DEAF THROUGH REAL-TIME TRANSLATION</b>	<b>367</b>
<b>REACHER GRABBER TOOL</b>	<b>371</b>
<b>FAIRY LIGHT COLOR</b>	<b>372</b>
<b>MYRELIEFF</b>	<b>376</b>
<b>FIN-ACCESS</b>	<b>377</b>
<b>SMART PILL BOX ORGANIZER</b>	<b>380</b>
<b>INNOVATION IN MAKEUP APPLICATOR FOR HAND DISABILITY PEOPLE</b>	<b>385</b>
<b>APEX SOLAR FAN</b>	<b>389</b>
<b>TALKBACK BALANCE CHECKER</b>	<b>394</b>
<b>THE SOSECURE BLIND-FOLD CANE</b>	<b>396</b>
<b>SIGNAVERSE</b>	<b>402</b>
<b>DISABILITY PEOPLE: SILANG TRANSLATOR</b>	<b>405</b>
<b>KINDLELIT: ADVANCING DYSLEXIA ACCESSIBILITY ON AMAZON KINDLE</b>	<b>408</b>
<b>SHOEDRY</b>	<b>411</b>
<b>BUDGETBUDDY BASED</b>	<b>416</b>
<b>BLYNUS VISION</b>	<b>420</b>



<b>VOICEEASE FOR PEOPLE WITH VISION IMPAIRMENT DISABILITIES</b>	<b>423</b>
<b>CAREABILITY</b>	<b>426</b>
<b>INNOVATIVE PITCHER PLANT TEA SET: A VERSATILE TABLE DECORATION WITH MULTIPLE COMPARTMENTS</b>	<b>430</b>
<b>HELPOK: HELP THOSE WHO NEED</b>	<b>433</b>
<b>REVOLUTIONIZING ADHD CARE: INTRODUCING FOCUS FLOW SMARTWATCH FOR ENHANCED DISABILITY SUPPORT</b>	<b>436</b>
<b>ZENSPHERE</b>	<b>441</b>
<b>CLOTHES BUTTON MAGNETIC</b>	<b>443</b>
<b>ADAPT TO EWHEEL SMART WHEELCHAIR</b>	<b>446</b>
<b>DISABILITY PEOPLE: ABILITYFIN</b>	<b>447</b>
<b>CAPABLEINVEST</b>	<b>450</b>
<b>MULTIFUNCTIONAL HEARING AIDS (AIDEWAY)</b>	<b>454</b>
<b>VTIFY APPLICATION</b>	<b>455</b>
<b>ONE STOP MAINTENANCE APP</b>	<b>458</b>
<b>BLIND STICK TECH (BST)</b>	<b>462</b>
<b>NAVICANE</b>	<b>466</b>

<b>THE ASSIST TOILET WHEELCHAIR</b>	<b>470</b>
<b>SOUND SENTRY</b>	<b>474</b>
<b>JAYJAY COFFEE</b>	<b>476</b>
<b>*BLOW WAVE PRO</b>	<b>480</b>
<b>BRIDGING THE GAP: TECHNOLOGICAL INNOVATIONS AND SUSTAINABILITY TOWARDS TRANSFORMING DISABILITY PRODUCTS</b>	<b>483</b>
<b>LAUNDRY SERVICES FOR PEOPLE WITH DISABILITIES</b>	<b>488</b>
<b>BUDGETBEE</b>	<b>491</b>
<b>VOICESTICK</b>	<b>494</b>
<b>SUPPER SOLE</b>	<b>495</b>
<b>EDUWISE PEN RECORDER</b>	<b>498</b>
<b>BHELP: THE 2-IN-1 BED AND WHEELCHAIR PROJECT</b>	<b>502</b>
<b>I-M-A-N APPROACH:</b>	<b>507</b>
<b>A CREATIVE METHOD TO TEACH AUTISTIC CHILDREN VERBAL COMMUNICATION</b>	<b>507</b>
<b>MF UMBRELLA</b>	<b>511</b>
<b>TEDDY GUARDIAN</b>	<b>514</b>
<b>SKIPPERS</b>	<b>519</b>

<b>PROSAFE: GUARDIAN GLOVE</b>	<b>523</b>
<b>ABLE APP</b>	<b>528</b>
<b>MONEY MASTER CALCULATOR: FINANCIAL CALCULATOR FOR BLIND OR VISION-IMPAIRED USERS</b>	<b>529</b>
<b>BANTU OKU APPLICATIONS</b>	<b>532</b>
<b>BOOKARMOR: A SUSTAINABLE SOLUTION FOR TEXTBOOKS LONGEVITY AND SUSTAINABILITY</b>	<b>535</b>
<b>MAGIC LIGHTERS</b>	<b>540</b>
<b>SKYSHIELD UMBRELLA</b>	<b>544</b>
<b>GLAMMIX</b>	<b>547</b>
<b>PAWTRACK HEALTH-GUARD</b>	<b>550</b>
<b>MONEYMINGLE: BRIDGING FINANCIAL LITERACY AND EXPERIENCE THROUGH INTERACTIVE LOAN EDUCATION APP</b>	<b>555</b>
<b>HOUSEHOLD LIFESTYLE : QUARTERCUT</b>	<b>562</b>
<b>WHEELCHAIR FOLDABLE TABLE</b>	<b>565</b>
<b>NAVIGATOR CANE</b>	<b>567</b>
<b>SILENT SPEAK CONNECT: YOUR BRIDGE IN BETTER HEARING</b>	<b>571</b>
<b>FINANCE BOARD GAME: CRITICAL THINKING FOR THE BLIND</b>	<b>575</b>

<b>ADVANCE SPEECH RECOGNITION</b>	<b>579</b>
<b>SENSORY KIT BOX</b>	<b>582</b>
<b>BRAILLE TABLET</b>	<b>585</b>
<b>BRAILLEFRESH: A BATHING INNOVATION ACCESSIBLE TO ALL</b>	<b>589</b>
<b>AIR UP FLAVOURED WATER BOTTLE</b>	<b>592</b>
<b>MYRELIEFF</b>	<b>597</b>
<b>ADAPTOWHEEL SMART WHEELCHAIR</b>	<b>598</b>
<b>MULTIFUNCTIONAL HEARING AIDS (AIDEWAY)</b>	<b>599</b>
<b>VOICESTICK</b>	<b>600</b>
<b>ABLE APP</b>	<b>601</b>
<b>GRABBYBITEZ</b>	<b>602</b>
<b>OKU SMART PARKING ASSISTANT</b>	<b>608</b>
<b>OBSTACLESENSE</b>	<b>612</b>
<b>VOLUNTEER FINDER APPLICATION</b>	<b>615</b>
<b>BAID: SMART HEARING AID WRISTBAND</b>	<b>618</b>
<b>MAKEUP BRUSH DRYER</b>	<b>622</b>

<b>UNIVERSE RING: EMPOWERING READING ACCESSIBILITY FOR PEOPLE WITH DISABILITIES</b>	<b>626</b>
<b>NEW PRODUCT DEVELOPMENT</b>	<b>630</b>
<b>SMART BRACELET (I-FIT)</b>	<b>631</b>
<b>COZYWRAP: TO SECURE AND PROTECT PATIENTS IN A COMFORTING WAY</b>	<b>634</b>
<b>COZEES, THE SELF-HEATING BLANKET</b>	<b>638</b>
<b>DYSCARD - DYSLEXIA-FRIENDLY CARD GAME</b>	<b>641</b>
<b>THE SPECTACLE SENSOR</b>	<b>644</b>
<b>LEXY LENSE</b>	<b>647</b>
<b>SNEAKSENSE SENSORY SHOE</b>	<b>650</b>
<b>CHROMAKIDS: KIDS COLOR BLINDNESS SPECTACLES</b>	<b>654</b>
<b>THE INTERACTIVE WEIGHTED LAP PAD WITH EMOTIONAL FEEDBACK</b>	<b>660</b>
<b>AI SMART RECITING BRAILLE QURAN PEN</b>	<b>662</b>
<b>QURANIC PILLOW</b>	<b>666</b>
<b>VISION VESSEL SMART BOTTLE</b>	<b>669</b>
<b>LAUNDRY BUTLER BY TIDYTOOLS</b>	<b>673</b>
<b>SMART WHEELCHAIR</b>	<b>676</b>

<b>DEAF PERSON GLASSES: MOUTH MOVEMENT TO SIGN LANGUAGE TRANSLATION</b>	<b>681</b>
<b>IDRINK COMPANY</b>	<b>683</b>
<b>SMART LASER FOR BLIND PEOPLE</b>	<b>686</b>
<b>INDIGO: SHADE OF DESIGN</b>	<b>688</b>
<b>SMART WHEELCHAIR</b>	<b>692</b>
<b>PORTABLE BLIND CANE</b>	<b>693</b>
<b>CARING-BASED EDUCATION PROGRAM MODULE FOR CRITICAL CARE NURSES</b>	<b>694</b>
<b>SPICES RACK WITH BRAILLE</b>	<b>697</b>
<b>MULTIFUNCTIONAL CLEANING STICK</b>	<b>702</b>
<b>COLOR-READING GLASSES</b>	<b>705</b>
<b>WHEELY BLISS</b>	<b>708</b>
<b>THE TALKING BUTTON</b>	<b>711</b>
<b>SINGGEST-EMPOWERING THE DEAF AND BLIND COMMUNITY THROUGH GESTURE-CONTROLLED ACCESSIBILITY</b>	<b>714</b>
<b>FAIT: FINANCIAL AUTISM INSIGHT TOOL</b>	<b>718</b>
<b>BRAILLE SMART GLOVE</b>	<b>722</b>
<b>SEAT AND TRACK CART</b>	<b>726</b>

<b>INTELLICANE (SMARTCANE)</b>	<b>729</b>
<b>CYBERWHEEL PRO BY INTELLIGUIDE COMPANY</b>	<b>733</b>
<b>BRILLET TOUCH PRICEMARKERS</b>	<b>736</b>
<b>IMPROVISING FOGGING MACHINE DESIGN KEY CHARACTERISTIC THROUGH FUNDAMENTAL PERFORMANCES</b>	<b>741</b>
<b>BORNEAN CUISINE RESTAURANT</b>	<b>747</b>
<b>VOICE B</b>	<b>751</b>
<b>THE MULTIFUNCTIONAL BUZZER WATCH: A SOLUTION FOR DEAF PEOPLE</b>	<b>756</b>
<b>SEGRE-BAG: REVOLUTIONIZING WASTE MANAGEMENT THROUGH INNOVATIVE SEGREGATION</b>	<b>760</b>
<b>ACTIVRAY ADVANCE SKELETON</b>	<b>764</b>
<b>TECHNOLOGY INNOVATION SMART JEWELRY, LUMIÉRE ARMILLA</b>	<b>767</b>
<b>SANDAL MOP</b>	<b>770</b>
<b>BLINDGUIDE: MULTIPURPOSE PORTABLE STICK</b>	<b>774</b>
<b>SENSE SPEND: AI-ENHANCED FINANCIAL APPS FOR INDIVIDUALS WITH VISUAL IMPAIRMENTS</b>	<b>777</b>
<b>AUTO-UPDATE CONTAINER LIDS SCANNER WITH EXPIRATION DATE DISPLAY</b>	<b>786</b>

<b>SPREADING THE KNOWLEDGE: APPROACHING THE OBLIVIOUS ABOUT HIGH SENSORY INPUTS</b>	<b>791</b>
<b>EZPASAR</b>	<b>795</b>
<b>TOUCHSENSE GLOVE</b>	<b>798</b>
<b>CARE WATCH</b>	<b>800</b>
<b>EZPLANABILITY</b>	<b>802</b>
<b>COZY CUP 312 CAFE</b>	<b>806</b>
<b>AUTISM SPECIALIZED BAND</b>	<b>809</b>
<b>MULTIPURPOSE UTENSIL</b>	<b>814</b>
<b>COMMUNITY AWARENESS TOWARDS DISABLED PERSON: OVERVIEW AT MALAYSIA CHAPTER</b>	<b>816</b>
<b>RESQALERT</b>	<b>820</b>
<b>U&amp;I</b>	<b>824</b>
<b>TRANSVISION: YOUR GLOBAL LENS</b>	<b>825</b>
<b>NOUR TRAVEL &amp; TOURS</b>	<b>829</b>
<b>SMARTREACH</b>	<b>833</b>
<b>PMAS CARE : PARENTAL MONITORING AND SUPERVISION CARE</b>	<b>837</b>



<b>BODY N' MIND SPA</b>	<b>841</b>
<b>HUGGING CHAIR FOR AUTISM</b>	<b>845</b>
<b>OLA KINO - AN EMOTIONAL ASSISTANT APPLICATION</b>	<b>848</b>
<b>MASTER BRACELET</b>	<b>851</b>
<b>SIGNSENSE</b>	<b>853</b>
<b>SMATTRESS</b>	<b>855</b>
<b>MATH MIND MASTERKIT: REVOLUTIONIZING FINANCIAL EDUCATION FOR YOUNG MINDS THROUGH GAMIFIED LEARNING</b>	<b>859</b>
<b>CAMPUSHARE</b>	<b>864</b>
<b>ADAPTAWEAR CO.</b>	<b>867</b>
<b>EQUALEASE FINANCIAL SERVICES</b>	<b>871</b>
<b>DUMPSTERDOT.CO - BEYOND TOUCH: MOTION SENSOR TRASH CANS PWD-FRIENDLY WASTE MANAGEMENT INNOVATIONS</b>	<b>874</b>
<b>BUZZALERT</b>	<b>877</b>
<b>DIGITAL EYES SMART GLASSES TECHNOLOGY</b>	<b>880</b>
<b>CHILDREN EDUCATION CENTER</b>	<b>884</b>
<b>LEXIPLAY DYSLEXIA LEARNING ADVENTURES</b>	<b>887</b>

<b>SIGN TECH PRO</b>	<b>891</b>
<b>CLEANING SERVICES FOR PEOPLE WITH DISABILITIES</b>	<b>894</b>
<b>CAREWHEEL</b>	<b>897</b>
<b>EASYMOTION</b>	<b>901</b>
<b>NOURISHVITAL</b>	<b>904</b>
<b>BLINDCARE .JR</b>	<b>908</b>
<b>CARING CLEAN</b>	<b>911</b>
<b>COOKIESTER</b>	<b>914</b>
<b>SMARTCHEF PRO STOVE</b>	<b>918</b>
<b>VERSASTEADY WAND</b>	<b>921</b>
<b>ADHD FRIENDLY TOYS BY CALMMIND CREATION.CO</b>	<b>924</b>
<b>BRAILLE WATCH</b>	<b>928</b>
<b>JUNGLE MATCH</b>	<b>930</b>
<b>JÆPPY: THE MULTIPURPOSE JACKET</b>	<b>934</b>
<b>SMART DESK LAMP</b>	<b>938</b>
<b>ROAD CITY EXPRESS</b>	<b>941</b>
<b>PRIMEXWHEELS</b>	<b>945</b>

<b>SMART FRIDGE</b>	<b>948</b>
<b>PORTABLE THERMOS WATER HEATER</b>	<b>952</b>
<b>AUTOMATIC BABY AND PET FENCE</b>	<b>956</b>
<b>NEW TECHNOLOGY WHITE STICK</b>	<b>960</b>
<b>MOBILITY SHOWER SOLUTION FOR PEOPLE WITH DISABILITIES</b>	<b>963</b>
<b>ANGEL WHEELS</b>	<b>968</b>
<b>ACCESSIBLE WEALTH: PERSONALIZED FINANCE FOR EVERY ABILITY</b>	<b>972</b>
<b>EMO PET (PERSONALIZED VIRTUAL ASSISTANTS WITH EMOTIONAL INTELLIGENCE)</b>	<b>975</b>
<b>COOLFLOW SHIRT</b>	<b>979</b>
<b>MAYFAA TOTE BAG</b>	<b>982</b>
<b>SOLARSPRINT POWER BANK</b>	<b>986</b>
<b>HISTORIA INDONESIA WITH RPG GAME</b>	<b>990</b>
<b>FINEASE</b>	<b>994</b>
<b>EZCOMB</b>	<b>998</b>
<b>THE SENSESTICK GLOVES</b>	<b>1002</b>
<b>MAGIC WAND</b>	<b>1004</b>
<b>“VTOKU”</b>	<b>1007</b>

<b>HIGH-TECH HEXAGON FRIDGE</b>	<b>1012</b>
<b>MEMORA FRAME: REIMAGINE YOUR WALLS WITH A TOUCH OF TECHNOLOGY</b>	<b>1016</b>
<b>CAMOCULAR</b>	<b>1020</b>
<b>MATHSLEXIA</b>	<b>1024</b>
<b>“WHEELY: ADVANCE TECHNOLOGY ON TRADITIONAL WHEELCHAIR”</b>	<b>1028</b>
<b>SENSA STRAP: ENHANCING SAFETY FOR VISUALLY IMPAIRED</b>	<b>1032</b>
<b>DYXTAB: TRANSFORMING LEARNING FOR DYSLEXIC CHILDREN</b>	<b>1035</b>
<b>EZ PRINT (PRINTING VENDING MACHINE)</b>	<b>1039</b>
<b>PREP PANTRY</b>	<b>1043</b>
<b>WHEELCHAIR SECUREMENT SYSTEMS</b>	<b>1047</b>
<b>GOBRELLA</b>	<b>1050</b>
<b>SIPPY PRESS - LIFESTYLE</b>	<b>1054</b>
<b>NAVIGATE AID STICK</b>	<b>1058</b>
<b>LUMINA FAN</b>	<b>1062</b>
<b>BRISK-WALK TROLLEY ASSISTANCE: AN INNOVATIVE APPROACH FOR OBESITY RECOVERY</b>	<b>1070</b>
<b>PORTABLE MEDKIT</b>	<b>1074</b>

<b>TIDYKIT</b>	<b>1077</b>
<b>BRAINWAVE: WHERE MAGIC MEETS NOTES - THE SMART NOTEBOOK WONDER</b>	<b>1081</b>
<b>TOURISM PLANNER APPLICATION</b>	<b>1084</b>
<b>SLEEPING HEADBAND</b>	<b>1088</b>
<b>TACTIBANCA: AUTOMATED TELLER MACHINE (ATM) FOR VISUALLY IMPAIRED INDIVIDUALS</b>	<b>1092</b>
<b>GINGER SURVIVOR</b>	<b>1096</b>
<b>BRILLEPHABET PUZZLE BOOK</b>	<b>1098</b>
<b>HELMET WITH INTEGRATED AUGMENTED REALITY DISPLAY</b>	<b>1103</b>
<b>AUDIO VIEW</b>	<b>1106</b>
<b>BLUSCENT AIR CONDITIONER</b>	<b>1110</b>
<b>MULTIPURPOSE IRON BOARD</b>	<b>1114</b>
<b>LEAD</b>	<b>1117</b>
<b>MOMMY MAGIC</b>	<b>1121</b>
<b>ECHO CLASP</b>	<b>1125</b>
<b>BOTTOMUPZ: STUDENT-FRIENDLY SMART BOTTLE WITH TEMPERATURE DISPLAY</b>	<b>1128</b>
<b>FOLDABLE STICK WITH TUMBLER HOLDER</b>	<b>1131</b>

<b>SHOE CABINET WITH AUTOMATIC ODOR CONTROL</b>	<b>1134</b>
<b>AAIM SMART PILLOW</b>	<b>1138</b>
<b>BALBAT BEAUTY.CO 7IN1 MAKEUP PEN.</b>	<b>1141</b>
<b>VISION TECH</b>	<b>1145</b>
<b>SMART PORTABLE WARDROBE</b>	<b>1148</b>
<b>MOBILE EASE ONE</b>	<b>1150</b>
<b>BRAILLE MENU</b>	<b>1153</b>
<b>I-DETECTOR</b>	<b>1157</b>
<b>PENDIVE</b>	<b>1161</b>
<b>SMART SHOE FOR BLIND PERSON</b>	<b>1166</b>
<b>BRAILLE CHECKERS: AN INNOVATIVE BOARD GAME DESIGNED FOR THE VISUALLY IMPAIRED, ENSURING FUN AND ACCESSIBILITY</b>	<b>1169</b>
<b>RAIN KIT</b>	<b>1172</b>
<b>MINDMINGLE: AN AI STUDY APP</b>	<b>1175</b>
<b>“WRITING MOUSE”</b>	<b>1178</b>
<b>MASSAGE CHAIR FOR PUBLIC USERS AND PERSONS WITH DISABILITIES</b>	<b>1181</b>
<b>SMART SPECTACLES</b>	<b>1185</b>

<b>POCKET IRON</b>	<b>1188</b>
<b>SMART ASSISTIVE WATCH</b>	<b>1192</b>
<b>ZEMAI'S ADJUSTABLE UMRAH CLOTHES</b>	<b>1195</b>
<b>SILENTVUE: ENHANCING THE WORLD FOR THE DEAF</b>	<b>1198</b>
<b>MAGNETOP</b>	<b>1203</b>
<b>JUTAWAN EXPRESS</b>	<b>1206</b>
<b>COSETTE BEAUTY &amp; WELLNESS KIT *</b>	<b>1211</b>
<b>HIBISCUS INTELLIGENT AGING MASKER</b>	<b>1214</b>
<b>HIGH +</b>	<b>1216</b>
<b>SMART WINDOW</b>	<b>1219</b>
<b>APPLICATION FOR VISUALLY IMPAIRED</b>	<b>1223</b>
<b>SMART DISPENSER DUSTBIN</b>	<b>1226</b>
<b>EMERGENCY 2-IN-1 CLOTH_HIJAB SCAFT ZIPPER</b>	<b>1229</b>
<b>EMPOWERING AUTISTIC READERS: HARNESSING THE POWER OF VISUALS IN BOOKS</b>	<b>1234</b>
<b>CLOTHMATE SOLAR SPINNER</b>	<b>1237</b>
<b>FROZSCAN</b>	<b>1240</b>

<b>TEH TARIK MAHMUDI: MAXIMIZING COGNITIVE BENEFITS OF MORINGA OLEIFERA, PLUKENETIA VOLUBILIS, AND ANDROGRAPHIS PANICULATA VIA CO-ENCAPSULATION TECHNIQUE.</b>	<b>1245</b>
<b>KOPI ALA KAZIM: <i>MOMORDICA CHARANTIA</i>'S EXTRACTION OPTIMIZATION</b>	<b>1251</b>
<b>TEENYMOUTH: AN AT-HOME MOUTH PROP TO AID IN ORAL HYGIENE CARE FOR PERSONS WITH SPECIAL NEEDS</b>	<b>1256</b>
<b>FROSTBITE : A CHILLING TREAT</b>	<b>1260</b>
<b>DYSGRAPHIA SEVERITY CLASSIFICATION USING SUPPORT VECTOR MACHINE (SVM) BASED ON AUTOMATED HANDWRITING IMAGE FEATURE EXTRACTION</b>	<b>1263</b>
<b>CELESTIAL (SUN CHARGER SLING BAG)</b>	<b>1268</b>
<b>THE LEVEL OF AWARENESS ON MENTAL HEALTH AND ITS IMPACT ON TIKTOK USERS</b>	<b>1272</b>
<b>AUTOMATIC DUO FOOD STIRRER</b>	<b>1275</b>
<b>WATER FILTER IMPLEMENTATION CAGE: MODULE OF CLEAN WATER AND AWARENESS FOR INDIGENOUS PEOPLE (ABL MODULE)</b>	<b>1278</b>
<b>GARDBOT : OUTDOOR VACUUM</b>	<b>1281</b>
<b>SENSORY STICK FOR VISUALLY IMPAIRED</b>	<b>1283</b>
<b>BUSINESS MODEL INNOVATION: STATIONERY VENDING MACHINE (SVM)</b>	<b>1286</b>
<b>SPECIALIST BABER</b>	<b>1289</b>



<b>THE LEVEL OF OF HEALTHCARE EDUCATION EFFECTIVENESS ON TIKTOK</b>	<b>1293</b>
<b>THE ACCEPTANCE OF TIKTOK AS A NEW LEARNING PLATFORM</b>	<b>1301</b>
<b>SMARTSNACK</b>	<b>1304</b>
<b>GARDENING HEDGE SHEARS</b>	<b>1307</b>
<b>WHEEL HOES</b>	<b>1311</b>
<b>TASBIH BRAILLE</b>	<b>1316</b>
<b>MYUTQH</b>	<b>1321</b>
<b>THE USAGE OF CHATGPT AS AN ALTERNATIVE WAY OF LEARNING</b>	<b>1325</b>
<b>THE LEVEL OF AWARENESS TOWARDS POSTPARTUM DISEASE IN MALAYSIA</b>	<b>1328</b>
<b>DEEP LEARNING BASED TRANSLATOR SYSTEM OF DYNAMIC SIGN LANGUAGE PATTERN</b>	<b>1331</b>
<b>AGUSTAN SYAMSUDDIN, RIDWANG, MAHARIDA, AHMAD RIJAL</b>	<b>1331</b>
<b>VOCABULARY VERSUS SOCIOCULTURAL KNOWLEDGE IN EFL READING COMPREHENSION</b>	<b>1332</b>
<b>SMARTMED BOX</b>	<b>1333</b>
<b>THE EFFECTIVENESS OF CONTENT CREATORS IN SPREADING POSITIVE INFLUENCE TOWARDS TIKTOK USERS</b>	<b>1338</b>
<b>ICAR4</b>	<b>1341</b>

<b>AUTOMATIC WATERING SYSTEM USING AC DRAIN WATER</b>	<b>1347</b>
<b>STELLAR THE EXPLORER: YOUR HELPFUL COMPANION FOR SMOOTH INTERNATIONAL TRAVEL</b>	<b>1350</b>
<b>JS-TRACKER APP</b>	<b>1353</b>
<b>COUNTBUDDY</b>	<b>1362</b>
<b>STAIR ASSIST CANE LEVEL 5</b>	<b>1367</b>
<b>ITADS: INSTRUCTIONAL DESIGN FRAMEWORK FOR MALAYSIAN HEARING-IMPAIRED STUDENTS' INTERACTIVE MULTIMEDIA TEACHING AIDS</b>	<b>1371</b>
<b>PELAN FATWA: INOVASI WAKAF PAMPASAN KEMATIAN TAKAFUL DI FWD TAKAFUL BERHAD</b>	<b>1381</b>
<b>C.A.R.E</b>	<b>1386</b>
<b>FEELMART</b>	<b>1389</b>
<b>GESTURE-CONTROLLED PROSTHETICS</b>	<b>1392</b>
<b>AQUASTRIDER</b>	<b>1396</b>
<b>PROTOTYPE APPLICATION OF SIGN LANGUAGE HADITH FOR HEARING IMPAIRED: FIVE HADITHS FROM ARBAIN NAWAWIYAH'S BOOK</b>	<b>1401</b>
<b>SPECIAL EDUCATION CONTINUOUS TRAINING UNIVERSAL MODULE (SPECTRUM) TOWARDS AN INCLUSIVE SOCIETY</b>	<b>1404</b>

<b>THE INNOVATION OF 8 NEW BRAILLE CODES FOR MASHAF AL-QURAN BRAILLE MALAYSIA (MQBM)</b>	<b>1407</b>
<b>IN SIGHT ROLL</b>	<b>1411</b>
<b>FONT KOD TANGAN QURAN ( KTQ)</b>	<b>1415</b>
<b><i>QURAN HAND CODE FONT</i></b>	<b>1415</b>
<b>INCLUSIVE DESIGN WORKSHOPS: EMPOWERING DESIGNERS AND DEVELOPERS TO CREATE ACCESSIBLE PRODUCTS</b>	<b>1418</b>
<b>OUR BATIK ESTETIKA ISTIMEWA (OBAETIBOX)</b>	<b>1422</b>
<b>PERANTI IQRABRAILLE - KURNIAAN DARIMU</b>	<b>1424</b>
<b>UTILIZATION OF VIDEO ASSETS IN PROMOTING TOURIST DESTINATIONS AND PROCESSED TYPICAL TABAGSEL</b>	<b>1428</b>
<b>SALACHOLESTA (OBAT HERBAL KOLESTROL DARI KULIT SALAK) SEBAGAI UPAYA MENINGKATKAN KESEHATAN DAN PEREKONOMIAN DI KOTA PADANGSIDIMPUAN</b>	<b>1429</b>

## **Sightless Shop**

Nur 'Aisyah Binti Ahmad Munawar<sup>1</sup>, Nursyauqina Binti Abdul Aziz<sup>2</sup>, Qhairienna Binti Mohammad Isa<sup>3</sup>, Nur Afza Batrisyia Binti Zamri<sup>4</sup>, Nuraishah Azwa Binti Ahirwa<sup>5</sup>, Syazana Arisyah Binti Arefin<sup>6</sup>

<sup>1</sup>Faculty Business and Management, Universiti Teknologi MARA (UiTM), Cawangan Melaka  
Kampus Bandaraya Melaka, 110 Off Jalan Hang Tuah, 75350 Melaka, Malaysia.  
[2023389313@student.uitm.edu.my](mailto:2023389313@student.uitm.edu.my)

Zunaidah Binti Abu Hassan,  
Faculty Business and Management, Universiti Teknologi MARA (UiTM), Cawangan Melaka  
Kampus Bandaraya Melaka, 110 Off Jalan Hang Tuah, 75350 Melaka, Malaysia.

### **ABSTRACT**

“Sightless Shop” is an application that is developed for blind people. This application consists of several tabs such as user profile, shopping cart and auto calculate features. It is not easy for blind people to do grocery shopping. Other features found in this "Sightless Shop" application is voice recognition software, which is a voice command that will help blind users throughout the use of the application. Also, another feature is a camera-based system that helps in scanning barcodes and determining the type of product, brands and prices for the user. To effectively commercialize the application, this application will target blind individuals, their families, carers, and relevant organisations through various channels such as social media, television, and radio advertisements. This application also engages with forums, communities, and events focused on accessibility and assistive technology to build trust and loyalty within the blind community. Actively involving blind individuals in the app's development ensures it meets their needs. Additionally, this application gathers feedback continuously to improve the app, updating it with new features and enhancements based on user input and technological advancements. The "Sightless Shop" app enables blind individuals to shop for groceries independently by providing voice assistant functions and access to past purchases. It enhances accessibility for blind shoppers, promotes independence, and empowers them to overcome fears of physical shopping while improving their technological skills and overall quality of life.

**Keywords:** Voice commands, Visual impairment, Shopping assistance, Scanner , Independent shopping

## **1. OBJECTIVES**

It is not easy for blind people to do grocery shopping. Blind people usually go shopping with friends or relatives and ask for assistance from the store to have a clerk assist them while shopping. For blind people who shop independently, it has been very important for them to learn and remember the layout of the store. But with this application, they can do physical shopping independently, which is easier and more convenient. Blind individuals can buy groceries independently with the assistance of innovative technologies.

Also, there is a function that involves using a camera-based system that can read the barcode and tell the name of the product and price of common objects if they stroll into a grocery shop to make a purchase. These technologies aim to enhance the shopping experience for blind people and provide them with autonomy and convenience in purchasing groceries. It is easier for blind people to purchase with this software because they can shop without having to have assistance to go to the grocery store. With the aid of voice assistance features on every tap, they can choose whatever they desire. Following that, users are able to compare prices and choose the desired brand. Lastly, they can check out and buy the product by adding it to their basket. We only provide the product with the physical shopping option with this app since it is more practical for them to do so and cash money includes braille, which is simple for blind people to understand and make payment.

To help those with visual impairments shopping more easily, we would like to work in partnership with Econsave supermarket. We selected Econsave because, based on our study, it is Malaysia's largest grocery chain with numerous locations. This app also allows users to simply add products to their carts and pay with cash on those products that they desire.

## **2. PROBLEM STATEMENT**

According to Monnie Parida, Manjira Sinha (2020), due to accessibility concerns, grocery shopping online presents difficulties for blind people. They might have trouble reading product descriptions, browsing web pages, and identifying pictures. According to William Villegas-Ch, Rodrigo Amores-Falconi and Eduardo Coronel-Silva (2023), a voice assistant has been suggested as a solution to these problems; it can give visually impaired people comprehensive product descriptions, make recommendations based on past purchases, and improve their entire shopping experience. Research from Michela Balconi, Carlotta Acconito and Laura Angioletti (2022). Additionally, compared to people without visual impairment, visually impaired customers may experience stress and dissatisfaction during the online purchasing process,

according to Doaa Khattab (2015), requiring a bigger cognitive investment and higher autonomic responses. Thus, developing inclusive and innovative e-commerce platforms with voice assistant features can greatly enhance the grocery shopping experience for those who are blind.

As far as we are concerned, there are a few different ways that blind people handle money and make purchases. They can ask for help from store employees or utilize the braille or tactile interfaces on ATMs and payment devices when making purchases. Identifying and managing money can also be aided by various technologies, like smartphone apps. Simultaneously, blind individuals who are capable of managing their finances and making purchases have also become the latest targets of scammers who offer fake investment schemes. Blind people can buy independently and safeguard themselves against scammers by using this app. That is our initiative to safeguard and assist those who are visually impaired.

### **3. NOVELTY**

The "Sightless Shop" application has voice recognition software as one of its functions. This software is incredibly useful for blind individuals because it can be operated entirely using voice commands, including selecting items, adding to the shopping cart, making purchases, auto calculation and completing payments up until the user receives their goods. This application only offers payment in cash because it is easier and more practical. Another feature included in this application is a camera-based system. It is a system that helps users know details about products more thoroughly. The way it works is that when the user opens the camera from this application and points the camera at a product barcode, the camera will emit a voice that will inform the user of the product categories, brands, and prices. This camera feature is very helpful for users when making physical purchases. Also, this "Sightless Shop" services are free to use and only require an internet connection.

### **4. POTENTIAL FOR COMMERCIALIZATION**

#### **Marketing and Promotion:**

For commercialization, this application targets blind individuals, families, and related organizations. It uses social media platforms, such as advertisements on television and radio. Additionally, it promotes forums and communities for disabled people that focus on accessibility and technology. Furthermore, immunity engagement for commercialization with blind communities through forums, social media, and events to build trust and loyalty. The input and active involvement of blind individuals in the development and improvement of the application may promote this application at conferences, events, or workshops related to the rights and capabilities of disabled people. Feedback and surveys are also important for commercialization. Continuously gathering feedback from users to identify areas for improvement so as not to be left behind actually attracts many low-income users. Update the

application frequently with new features, voice command and assistance and improvements based on user feedback and technological advances.

## **5. RACTICALITY & USEFULNESS**

"Sightless Shop" was created especially to assist blind individuals in grocery shopping independently. Camera-based functions and voice assistant functions are available to assist with their purchases. This application enhances the accessibility of visionless people to shopping physical stores and it promotes independence for blind users by providing instant access with assistance for various tasks, such as the camera-based system to scanner barcodes which will read the label name and price of the product in common objects in the store. This application empowers blind people to overcome their fear of physical shopping. In addition, this application helps them enhance their skills to use technology in their daily lives, ultimately improving their quality of life. This application will collaborate with Econsave supermarket to give all Malaysian blind people the convenience of buying their own groceries.

## **6. CONCLUSION**

In conclusion, the "Sightless Shop" app offers a revolutionary solution to the challenges faced by blind individuals when it comes to grocery shopping. By benefiting from innovative technologies and incorporating features such as a trolley cart and auto calculated, profile management, and camera-based text recognition, voice command and the app empowers blind users to shop independently and conveniently.

Moreover, the inclusion of a camera-based system for reading text labels and product packaging on common objects adds another layer of accessibility, making it easier for visually impaired individuals to identify and select the items they need.

Overall, the "Sightless Shop" app represents a significant step forward in promoting autonomy and inclusivity for blind individuals, revolutionising the way they engage in everyday tasks such as grocery shopping. With its user-friendly interface and comprehensive features, it has the potential to make a profound impact on the lives of visually impaired individuals, providing them with greater independence and convenience in their shopping endeavours.

## **ACKNOWLEDGEMENT**

First and foremost, we would like to praise and thank Allah for the strengths and his blessing for the opportunity given to us to complete this assignment for this semester. To finish this assignment, we reach an initiative to take some advice and guidance from some respected persons, who deserve our deepest gratitude. We possibly could not have made it this far without the lecturer's guidelines and support and everyone's contributions. As the completion of this assignment gave us much pleasure, we sincerely would like to show our gratitude to Madam Zunaidah Binti Abu Hasan as our advisor and lecturer for Personal Financial Planning

(FIN533) for her non-stop effort to help and give guidance to help us complete the assignment. We are very grateful to have her as our lecturer as she never give up lending her hand by providing us with suggestions regarding how to create this "Sightless Shop" app also provides all of the resources required to ensure that everything is successful. Finally, thank you to our family and friends who have always given us in moral support in many aspects. Last but not least, thank you to our group members Nur'Aisyah, Nursyauqina, Qhairienna, Nur Afza, Nuraishah Azwa and Syazana who were involved in this assignment and make sure that we can finish this task with complete knowledge about the "Sightless Shop" app. Thank you

## REFERENCES

- Liu, G., Ding, X., & Yu, C. (2019, April). *"I Bought This for Me to Look More Ordinary": A Study of Blind People Doing Online Shopping*.  
[https://www.researchgate.net/publication/332741640\\_I\\_Bought\\_This\\_for\\_Me\\_to\\_Look\\_More\\_Ordinary\\_A\\_Study\\_of\\_Blind\\_People\\_Doing\\_Online\\_Shopping](https://www.researchgate.net/publication/332741640_I_Bought_This_for_Me_to_Look_More_Ordinary_A_Study_of_Blind_People_Doing_Online_Shopping)
- Zaman, H. B., & Ahmad, A. (2008, September). Voice recognition system for the visually impaired: Virtual cognitive approach.  
[https://www.researchgate.net/publication/4376252\\_Voice\\_recognition\\_system\\_for\\_the\\_visually\\_impaired\\_Virtual\\_cognitive\\_approach](https://www.researchgate.net/publication/4376252_Voice_recognition_system_for_the_visually_impaired_Virtual_cognitive_approach)
- Farghal, A. E. (2023, November 22). (PDF) *Camera-Based Navigation System for Blind and Visually Impaired People*. ResearchGate. Retrieved April 3, 2024, from  
[https://www.researchgate.net/publication/365691583\\_Camera-Based\\_Navigation\\_System\\_for\\_Blind\\_and\\_Visually\\_Impaired\\_People](https://www.researchgate.net/publication/365691583_Camera-Based_Navigation_System_for_Blind_and_Visually_Impaired_People)
- Monnie Parida, Dr Manjira Sinha (2020, July). *Pandemic and disability: Challenges faced and role of technology*. 33(4), 245-252  
<https://content.iospress.com/articles/technology-and-disability/tad200311>
- William Villegas-Ch, Rodrigo Amores-Falconi and Eduardo Coronel-Silva (2023, May). *Design Proposal for a Virtual Shopping Assistant for People with Vision Problems Applying Artificial Intelligence Techniques*, 7(2), 96.  
<https://doi.org/10.3390/bdcc7020096>
- Michela Balconi, Carlotta Acconito and Laura Angioletti (2022, November). *Emotional Effects in Object Recognition by the Visually Impaired People in Grocery Shopping*, 22(21), 8442  
<https://doi.org/10.3390/s22218442>



Doaa Khattab (2015, November). *Rethinking the Grocery Store: Inclusive Wayfinding System for Visually Impaired Shoppers in Grocery Stores*, 5(2), 125-156

<https://www.jaccs.org/index.php/jaccs/article/view/104>

(n.d.). Be My Eyes - See the world together. Retrieved April 3, 2024, from <https://www.bemyeyes.com/>

*Be My Eyes app*. (n.d.). Healthify. Retrieved April 3, 2024, from <https://healthify.nz/apps/b/be-my-eyes-app/>