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2024



International Industrial Revolution 4.0 Exposition

"INNOVATING IDEAS, TRANSPIRING DREAMS"

ABSTRACT BOOK

Strategic Partners:



Perpustakaan
Sultan Badlishah

Organized By:

**COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS,
UNIVERSITI TEKNOLOGI MARA, KEDAH BRANCH**

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UITM Cawangan Kedah Channel

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Copy Editors: Mohd Zhafri Mohd Zukhi
Shahida Farhan Zakaria
Norin Rahayu Shamsuddin
Nor Athirah Mohd Zin
Khairul Adilah Ahmad

Cover Design: Syahrini Shawalludin
Jasmin Ilyani Ahmad

IREx 2024

The successful inauguration of IR4.0 Exposition IREx 2019 has witnessed ground breaking initiatives, ideas, and innovations materialised into numerous practical devices today. Treading on the same triumph, the College of Computing, Informatics, and Mathematics, UiTM Kedah is thrilled to announce the continuation of said event, IREx 2024 with the theme: *Innovating Ideas, Transpiring Dreams*.

The IREx 2024 aspires to incorporate even more exciting new technologies including, but not limited to, Information & Communication Technology (ICT), Educational Technology & Innovation (ED), Operational Excellence (OE), Internet of Things (IoT), Process Improvement, Ideas & Design, Multimedia, and Electronics that will chart new milestones in human history. This will serve as an excellent platform for scientists and innovators alike to meet the like-minded individuals and showcase inspiring ideas and notable innovations.

PROGRAM SCHEDULE

International Industrial Revolution 4.0 Exposition (IREx 2024)
21ST May 2024 (Tuesday)
Dewan Perdana, UiTM Kedah Branch

TIME	EVENT
8.00 – 9.00 am	Registration & Booth Set Up
9.00 am – 12.00 pm	Exhibition & Judging Session
12.00 pm – 2.00 pm	Obedient Drone Session & Break
2.00 pm – 5.00 pm	Official Closing & Prize Giving Ceremony
5.00 pm	Program Ends

Official Closing Ceremony

International Industrial Revolution 4.0 Exposition (IREx 2024)

TIME	EVENT
2.00 pm	Arrival of Guests and Participants
2.30 pm	Arrival of VVIP
	National anthem - Negaraku And Wawasan Setia Warga
2.40 pm	UiTM
	Welcoming Speech
3.00 pm	Rector's Welcoming Speech
	Officiating Speech
3.10 pm	Gimmick & Montage presentation
3.30 pm	Prize Giving Ceremony
4.00 pm	Photography
5.00 pm	Program Ends

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IRX082	MULTIPURPOSE SOAP	5
IRX083	PUFFER FISH BOAT	6
IRX092	MY GAMES ACADEMIA	7
IRX095	'ROBOCRAB' PEMBERSIH SAMPAH	8
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CATEGORY B

AI-POWERED SCURVY DETECTION : BRIDGING HEALTHCARE DISPARITIES IN RURAL SETTINGS

Muhammad Zairul Hadif Zais¹, Darwisy Aiman Khairul Azlan², Muazam Mokhtar³, Assoc. Prof. Ir. Dr. Ihsan Mohd Yassin⁴
^{1,2,3}Mara Junior Science College Pengkalan Hulu, 33100, Pengkalan Hulu , Malaysia

my_muaz@yahoo.com.my

*⁴Microwave Research Institute, Universiti Teknologi MARA,
40450 Shah Alam, Malaysia
ihsan_yassin@uitm.edu.my*

ABSTRACT - Scurvy, historically associated with sailors on long voyages without access to fresh fruits and vegetables, is characterized by symptoms like fatigue, swollen gums, and impaired wound healing, highlighting the importance of adequate vitamin C intake. Given the resurgence of scurvy, particularly in developed countries where it was previously considered rare, there is a pressing need for improved diagnostic tools to detect and classify this condition efficiently and accurately. Rural areas often face challenges of limited healthcare infrastructure and skilled medical professionals, leading to delayed diagnosis and management of diseases such as scurvy. This research proposes an innovative solution by developing an artificial intelligence (AI) model using the AlexNetCNN architecture to detect scurvy, thereby overcoming barriers to timely diagnosis in rural settings. Comprehensive datasets are collected from public resources such as Google to train the AI model for accurate scurvy detection. The collected images are cropped and resized to standardize the input format, optimizing the model's efficiency and performance. Initial testing of the AI model reveals a remarkable accuracy rate of 100% in scurvy detection, showcasing the potential of AI technology to address healthcare disparities and improve diagnostic capabilities, particularly in underserved rural areas. The project aims to further develop the AI model into a user-friendly app, empowering individuals in rural areas to self-assess and detect scurvy early, thereby facilitating timely intervention and improving health outcomes in vulnerable populations.

Keywords: Scurvy, Artificial intelligence (AI), Rural healthcare, Diagnostic tools, AlexNetCNN architecture



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