



UNIVERSITI  
TEKNOLOGI  
MARA

Cawangan Melaka

In partnership with



TADULAKO UNIVERSITY



i - JaMCSIIIX  
2023

# ABSTRACT BOOK 2023

(i - JaMCSIIIX)

INTERNATIONAL JASIN

MULTIMEDIA AND COMPUTER SCIENCE

INVENTION AND INNOVATION EXHIBITION

PUBLICATION DATE :8 NOV 2023

<https://iamcsiix.uitm.edu.my/>



# **i - J a M C S I I X**

## **2023**

INTERNATIONAL JASIN MULTIMEDIA & COMPUTER SCIENCE  
INVENTION AND INNOVATION EXHIBITION (I-JaMCSIIIX) 2023

# **Virtual Award Ceremony**

## **8th November 2023 Wednesday**

Platform: YouTube

[https://www.youtube.com/channel/UCW3Mw4\\_ngn6tn8gyXIOpLlw](https://www.youtube.com/channel/UCW3Mw4_ngn6tn8gyXIOpLlw)





# i - J a M C S I I X

## 2023

INTERNATIONAL JASIN MULTIMEDIA & COMPUTER SCIENCE  
INVENTION AND INNOVATION EXHIBITION (I-JaMCSIIIX) 2023

COPYRIGHT © 2023

i-JaMCSIIIX

Universiti Teknologi MARA Cawangan Melaka Kampus Jasin  
77300, Merlimau, Melaka

**Web: <https://jamcsiix.uitm.edu.my>**



In partnership with  
*Tadulako University*

## **ORGANIZING COMMITTEE**

**PATRON**

PM DR ISMADI MD BADARUDIN

**ADVISOR I**

TS DR JAMALUDDIN HJ JASMIS

**ADVISOR II**

DATO' DR MOHD HAJAR HASROL JONO

**PROGRAM DIRECTOR**

**DR. NUR SUHAILAYANI SUHAIMI**

**DEPUTY DIRECTOR**

TS DR NURUL HIDAYAH BINTI MAT ZAIN

**SECRETARY I**

**ANIS SHOBIRIN ABDULLAH SANI**

**SECRETARY II**

FAIQAH HAFIDZAH HALIM

**TREASURER I**

**SITI AISYAH ABD KADIR**

**TREASURER II**

UMMU MARDHIAH JALIL

**NURBAITY BINTI SABRI**

DR. SITI FEIRUSZ AHMAD FESOL

**PUBLICATION**

DR. AHMAD FIRDAUS BIN AHMAD FADZIL

SITI NURAMALINA BINTI JOHARI

ROSNIZA ROSLAN

**Ts DR. ALYA GEOGIANA BUJA**

NORBAHIYAH AWANG

**JURY**

Ts. DR. NOR AFIRDAUS ZAINAL ABIDIN

DR. RAIHAH AMINUDDIN

NOOR AFNI DERAMAN

**SITI FAIRUS BINTI FUZI**

BUSHRA BINTI ABDUL HALIM

**REGISTRATION**

NORDIANAH BINTI JUSOH@HUSSAIN

AINON SYAZANA BINTI AB HAMID

SITI NURSYAHIRA BINTI ZAINUDIN

**FADILAH EZLINA SHAHBUDIN**

HAJAR IZZATI MOHD GHAZALLI

**SYSTEM**

FADHLINA IZZAH SAMAN

NOR AZIDA MOHAMED NOH

**SHAHITUL BADARIAH SULAIMAN**

IZNI SYAMSINA SAARI

**INVITATION AND PROMOTION**

NOR ADILA KEDIN

	ADI HAKIM BIN TALIB MOHD AMIRUL BIN ATAN
<b>MULTIMEDIA</b>	<b>Ts. NURUL NAJWA ABDUL RAHID@ABDUL RASHID</b> NOOR ASHITAH ABU OTHMAN ANWAR FARHAN ZOLKEPLAY
<b>AWARD</b>	<b>ANITA BINTI MOHD YASIN</b> NURUL EMYZA ZAHIDI FATIMAH HASHIM SITI RAMIZAH JAMA DR NURUL HUDA NIK ZULKIFLI MARIATHY BINTI KARIM
<b>CERTIFICATE</b>	<b>KHAIRUL NURMAZIANNA ISMAIL</b> NUR NABILAH ABU MANGSHOR ZUHRI ARAFAH ZULKIFLI HAZRATI ZAINI
<b>INTERNATIONAL RELATIONS</b>	<b>Ts. DR. SITI RAHAYU ABDUL AZIZ</b> ALBIN LEMUEL KUSHAN SHAHADAN SAAD
<b>LIAISON OFFICER</b>	<b>SYAFNIDAR ABDUL HALIM</b> AJK WAKIL UNTAD
<b>SPONSORSHIP</b>	<b>ANIS AMILAH SHARI</b> MOHD RAHMAT MOHD NOORDIN DR YUZAIMI YUNUS DR SURYAEFIZA KARJANTO
<b>SECRETARIAT &amp; APPRECIATION BANQUET</b>	<b>RAIHANA MD SAIDI</b> NUR SYUHADA BINTI MUHAMMAT PAZIL ANIS AFIQAH SHARIP SITI MAISARAH MD ZAIN HAZWA HANIM MOHAMED HAMZAH

## **UNTAD'S COMMITTEE FOR I-JAMCSIIX 2023:**

PROF. IR. MARSETYO, M.AG., PH.D.

PROF. I WAYAN SUDARSANA, S.SI., M.SI.

PROF. JUNAIDI, S.SI., M.SI., PH.D.

ELISA SESA, S.SI., M.SI., PH.D.

MUKRIM, M.ED., PH.D.

ZARKIANI HASYIM, S.PD., M.ED.

DR. HJ. ANI SUSANTI, M.SI.

DR. ISKANDAR, M.HUM.

DR. IR. ROIS., MP.

SYARIFUL ANAM, S.SI., M.SI., PH.D.

DR. NAHARUDDIN, S.PD, M.SI.

DR. DRG. ELLI YANE BANGKELE, M.KES.

HERMAN, SKM., M.MED.ED.

DR. IR. SAMLIOK NDOBE, M.SI.

DR. RAHMAT BAKRI, S.H., M.H.

DR. HAERUL ANAM, SE., M.SI.

DR. IR. BAKRI, S.T., PG. DIPL. ENG., M.PHIL.

DR. IR. MUHAMMAD YAZDI PUSADAN, S.KOM., M.ENG.

IR. SYAIFUL HENDRA, S.KOM., M.KOM.

RIZANA FAUZI S.T., M.T.

MOHAMMAD FAJRI, S.SI., M.SI.

NURUL FISKIA GAMAYANTI, S.SI., M.SI.

DR. NUR'ENI, S.SI., M.SI.

IMAN SETIAWAN, S.SI., M.SI.

FADJRIYANI, S.SI., M.SI.

## LIST OF SPONSORS

### External Company Sponsors



*Klinik Dr Jamaluddin*

*Klinik Mawar Jasin*

*Nasi Ayam Ala Cina Zul*

*ADS Oasis Enterprise*

*Noorys Enterprise*

*Che Ramli bin Che Ismail*

*Beria Maju Enterprise*

*Rintiz rezeki*

*H&K food cafe*

*HS Gerak Wawasan*

### Individual Sponsors

*En. Muhammad Hanif bin Abdul Aziz*

*Nor Suhaida binti Karjanto*

# Table of Contents

Registration ID	Project Title	Page
JM003	Deep Learning Model for 5W (What, When, Where, Who, and Why) Sign Language Translation System	1
JM005	Ramadhan Prep: A Mobile Application in Preparing for the Bigger Season of the Year	2
JM006	BTF Cake Recommender and Management System by using Rule Based	3
JM007	ALIMS - Assets Loan and Inventory Management with SMS Notification	4
JM008	IJH – Immediate Job Hiring System for Part-Timers with Location-Based	5
JM009	CRC – Clothing Review Classification using Sentiment Analysis	6
JM010	Web-Based Safety Helmet Detection System for Construction Site Worker	7
JM011	A Mobile Application System for Parking Validation Based on Deep Learning Image Processing	8
JM012	DEPsy Model	9
JM013	The Use of Computer Diagnostic Apps to Assist Computer Troubleshooting	10
JM014	Quantitative Spasticity Assessment Model of Neurological Disorder Patients	11
JM015	HELPIE: Stress Consoling App	12
JM016	SmartER: Smart English Reader	13
JM017	Synergistic Cyber Security Awareness Model for the Elderly (SCSAM-Elderly)	14
JM018	Kusoke Adventures: Recycling Interactive Game	15
JM019	Rider Parking Guidance using Location-Based Services and Crowdsourcing	16
JM020	PANTAU: Smart Intruder Detection from Video Surveillance Using Deep Learning	17
JM022	Plastopoll: A Serious Game to Raise Awareness About Plastic Pollution	18
JM023	Enhanced Car Park Security Through an Automatic Plate Number Recognition (APNR) System Featuring QR Code Generation	19



<b>JM025</b>	Group Assignment Management System (GAMS)	20
<b>JM026</b>	Proactive Safety Culture Application (PROSCA) Using Geolocation	21
<b>JM027</b>	Flood Wise: Mobile Virtual Reality for Flood Preparation Awareness	22
<b>JM028</b>	Recommendation System of Sports Centre in Malaysia Using Content Based Filtering	23
<b>JM029</b>	Twitter Sentiment Analysis of Malaysian Fast Food Restaurant Chains: A Novel Approach to Understand Customer Perception using Naïve Bayes	24
<b>JM030</b>	ARTventure: Learning Malay Traditional Dance Through Augmented Reality	25
<b>JM031</b>	ExpenseEase - Living Expenses Management Mobile Application	26
<b>JM032</b>	Drowsiness Detection and Alert System Using Face Recognition with Raspberry Pi	27
<b>JM033</b>	Web Application of Facial Emotion Recognition in Classroom Learning Environment with Raspberry Pi 4	28
<b>JM034</b>	HexaBingo MathQuest	29
<b>JM035</b>	Development of mobile app: Funeral services system (FSS)	30
<b>JM036</b>	Development of Mobile Application: Digital Mutawwif	31
<b>JM037</b>	Assessment Marks Management System: A Excel VBA Approach	32
<b>JM038</b>	Design and Fabrication of a Potato Peeling Machine	33
<b>JM040</b>	Donatenow: A Crowdsourcing-Based Mobile Application with Geolocation and Content-Based Filtering Algorithm	34
<b>JM041</b>	TextCrunch	35
<b>JM042</b>	Enhancing College Laundry Management System Through Web-Based Queueing Technique	36
<b>JM043</b>	Cyber Security Fun Race	37
<b>JM044</b>	Food Intake Monitoring and Management System for Athletes	38
<b>JM046</b>	A Game-Based Learning on Food Nutrition for Children	39
<b>JM047</b>	Innovative Video on Compound Interest	40
<b>JM048</b>	Detection of the Spread Covid-19 in Indonesia using K-Means Clustering Algorithm	41
<b>JM049</b>	Forecasting Inflation Rate in Malaysia Using Artificial Neural Network (Ann) Approach	42

<b>JM050</b>	Factors Affecting the House Price Among Kuala Lumpur, Selangor and Johor	43
<b>JM051</b>	Oxygen Hydrogen Generator (HHO Generator)	44
<b>JM052</b>	IoT-based Water Quality Monitoring System for Goldfish	45
<b>JM053</b>	KIT PRO-TAJ (Professional tajwid)	46
<b>JM054</b>	A Framework Of Procurement Analytics For Fraud Coalition Prediction	47
<b>JM055</b>	Exploring Classical Chinese Poetry with AI Tool in PPT Design	48
<b>JM056</b>	Developing Emergency Application for LRT Passengers with Decision Tree Algorithm (RailAlert!)	49
<b>JM057</b>	LetsGoFit: Gamified Mobile Health Application	50
<b>JM058</b>	Tools for Critical Thinking in IT	51
<b>JM059</b>	Sheep Tracker via Radio Frequency Identification (RFID) System	52
<b>JM060</b>	Developing an Application for Handyman Services Platform Using Geofencing and Content-based Filtering (Handy2Help)	53
<b>JM061</b>	Modeling Cases of Stunting Toddler in Indonesia using the Conway Maxwell Poisson Regression Method	54
<b>JM063</b>	Clustering Regencies/Cities in Central Sulawesi Province Based on Poverty Level Using the Average Linkage Method with Principal Component Analysis (PCA)	55
<b>JM064</b>	An Application for Vehicle Rental Service Advertising Using Geofence With Content-Based Filtering (ReadyVehicle)	56
<b>JM065</b>	MYB40: FINGERTECH B40 DISCOUNT CARD	57
<b>JM066</b>	Horticulture Land: Guide to Being A Plantsman Through Green Game	58
<b>JM067</b>	IMFLOODVR : An Immersive Virtual Reality Serious Game for Flood Risk Mitigation Awareness	59
<b>JM068</b>	Tomoe : Topic Modelling Web Application	60
<b>JM069</b>	ROVIGA: Model-Based Capacitive Soil Moisture Sensor for IoT-Based Plant Pot	61
<b>JM070</b>	Classification and Visualization on Eligibility Rate of Applicant's LinkedIn Account Using Naïve Bayes	62
<b>JM071</b>	Forecasting the Number of Schistosomiasis Cases (Snail Fever) in Napu, Central Sulawesi, Using the Auto Regressive Integrated Moving Avarege (ARIMA) Method	63
<b>JM072</b>	Delivera Flow	64

<b>JM073</b>	PeerLoom: Peer-to-Peer Skill Exchange Platform for University Students	65
<b>JM074</b>	Forecasting the Open Unemployment Rate in Central Sulawesi Province Using the Autoregressive Integrated Moving Average (ARIMA) Method	66
<b>JM075</b>	Pre-Parent Test as an Effort to See Adults Readiness to Become Parents Based on Web	67
<b>JM076</b>	The Development of Edu-Fertiblox Digital Game Using Roblox as ABM in The Topic of Fertigation Systems for The Subject of Design and Technology Level 1	68
<b>JM077</b>	SPARK C++: Bridging Concepts with Analogies, Multimedia, and Interactive Quizzes	69
<b>JM078</b>	PLC-Based Water Filling Machine Simulator for Teaching and Learning Activities	70
<b>JM079</b>	HANA'S Map	71
<b>JM080</b>	Classification and Visualization of E-Commerce Product Reviews Comparison Using Support Vector Machine	72
<b>JM081</b>	Futech.Edu (Future Technology Education): Teaching and Learning Application Design in The Society 5.0 Era	73
<b>JM082</b>	Checkers Match Game	74
<b>JM083</b>	SafeDrop: Intelligent Secure Parcel Locker	75
<b>JM084</b>	Gamification in English for Report Writing: Engaging Learning through Webinars	76
<b>JM085</b>	Iffah's Busy Board (IBB)	77
<b>JM086</b>	3R Bag	78
<b>JM087</b>	'CHICK VS VIRUS', A Game-Based Learning Approach in Teaching Students	79
<b>JM088</b>	MyIGCSE-Time: STEM IGCSE for Students	80
<b>JM089</b>	Kad 'Kat Mana Tu?'	81
<b>JM090</b>	Learning Project Formulation using Gamification Approach	82
<b>JM091</b>	Hoopla Pocket Location Aware Mobile Application with Augmented Reality	83
<b>JM092</b>	Mini Blossom Fan: A Practical Approach to Workspace Comfort	84
<b>JM093</b>	Cyberforce: A Cybersecurity Fps-Based Game	85
<b>JM094</b>	An IoT-based Instrument for Free Fall Motion	86

# Forecasting Inflation Rate in Malaysia Using Artificial Neural Network (ANN) Approach

Muhammad Athir Mohd Junaidi<sup>1</sup>, Siti Aishah Mohd Shafie<sup>2</sup>

<sup>1,2</sup> Universiti Teknologi MARA Cawangan Negeri Sembilan Kampus Seremban, 70300 Seremban, Negeri Sembilan, Malaysia

athirjunaidi29@gmail.com, ctaishah@uitm.edu.my

**Abstract**—Forecasting is very important for planning and decision-making in all fields to predict the conditions and cases surrounding the problem under study before making any decision. Hence, many forecasting methods have been developed to produce accurate predicted values. Inflation rates provide appropriate and timely information about the trend changes, which affect the economy of Malaysia because of the different uses in many ways. It can be used as an economic indicator that is beneficial for policy makers, investors, and consumers to make a planning and decision. It also used as a supplement for statistical chains to predict future values rate to make sure that the data accurately reflect the pattern of the inflation rate in Malaysia. Therefore, the main objective of this study is to construct an inflation rate model for Malaysia and make a prediction of inflation rate for upcoming six months in 2023 by using artificial neural network (ANN). The proposed ANN model consists of an input layer, hidden layer, and output layer, while it applies the tangent function (TanH) as a testing and validation algorithm in the hidden layer. Finally, the predicted values of inflation rate are compared with the measured values. The proposed ANN model with four hidden nodes is more efficient than other models in predicting inflation rate after considering parsimonious architecture. The obtained Coefficient of Determination and Root Mean Squared Error (RMSE) values using the ANN method is 0.6399 and 0.9879 respectively. This study presents a new model for forecasting inflation rate values that are beneficial for many parties. The model was used to predict upcoming months then compared to the actual data.

**Keywords**— *Artificial Neural Network, forecasting, inflation rate, hidden layer, model parsimony*



# i - J a M C S I I X

## 2023

PUBLISHED BY:

i-JaMCSIIX

Universiti Teknologi MARA Cawangan Melaka

Kampus Jasin

77300 Merlimau, Melaka

Tel: 062645000

Email: [jamcsiix@uitm.edu.my](mailto:jamcsiix@uitm.edu.my)

Web: <https://jamcsiix.uitm.edu.my/>

**All rights reserved. No part of this publication  
may be reproduced, stored in a retrieval system  
or transmitted in any form or by any means,  
electronic, mechanical, photocopying, recording  
or otherwise, without permission of the  
copyright holder**