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Cawangan Melaka

# i-JAMCSIIX 2022

International Jasin Multimedia & Computer Science Invention and Innovation Exhibition

## ABSTRACT BOOK

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**In Partnership:**



Tadulak● University

# **i-JaMCSIIX** **2022**

International Jasin Multimedia & Computer Science Invention and Innovation Exhibition

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i-JaMCSIIX

Universiti Teknologi MARA Cawangan Melaka Kampus Jasin

77300, Merlimau, Melaka

Web: <https://jamcsiix.wixsite.com/2022>

In Partnership:

Tadulako University



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## Gold Price Forecasting by Using ARIMA

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***Abstract***—Gold is the most popular investment in the world because it has shown to be the most effective safe haven in a lot of countries. It is difficult to use method such as technical analysis to predict the gold value. Many prediction problems that contain a time component require time series forecasting, which is an important topic of machine learning. This is a study of gold rate that will predict the gold price by using one of the time series methods which is Autoregressive Integrated Moving Average (ARIMA). In order to solve the problem, a dataset of gold collected from World Gold Council website. The main feature of the system is to create one stop centre of gold investment which can predict the gold price and other feature that can help investors. The predicted value visualized in a line chart graph that have two timeframe which are weekly and monthly. Then, admin able to customize the duration of the prediction which make the visualization graph become dynamic. The system also provide other features such as latest gold news, gold investment calculator and google map location of gold branch around Malaysia. The model of the prediction also done with accuracy testing by using Mean Square Error (MSE) and Root Mean Square Error (RMSE). As the results, the system got MSE of 0.0005 for weekly timeframe and 0.0013 for monthly timeframe. While the result of RMSE were 0.0223 for weekly timeframe and 0.0363 for monthly timeframe.

***Keywords***—*Time Series Analysis*