REAL TIME CURRENCY CONVERTER

Bharti Nana Durgade[1], Bhakti Nitin Kadappa[2], Shreya Kiran Patil[3], Nilkanth Maharudra Malapure[4]

[1] *Lecturer, Computer Science and Engineering,DKTE's Yashwantrao Chavan Polytechnic,Ichalkaranji, Maharashtra, India*
[2] *Student, Computer Science and Engineering,DKTE's Yashwantrao Chavan Polytechnic,Ichalkaranji, Maharashtra, India*
[3] *Student, Computer Science and Engineering,DKTE's Yashwantrao Chavan Polytechnic,Ichalkaranji, Maharashtra, India*
[4] *Student, Computer Science and Engineering,DKTE's Yashwantrao Chavan Polytechnic,Ichalkaranji, Maharashtra, India*

ABSTRACT

Different countries use different currencies and these currencies change daily compared to each other. Those who have transferred money (one currency to another) from one country to another must be updated with the latest currency exchange rates in the market. With this in mind, the Currency Converter project has been created. This is just an app development like a calculator using Python. In this application, there are regular updates about each country's currency by which it reflects the current currency market value and conversion rate. Such an application can be used by any user, but it is mainly useful for business, shares and finance related areas where money transfer and currency exchange takes place daily. In this currency converter app, users are given the option to choose the type of conversion, i.e. "this" currency to "to" currency. This simple feature allows users to enter the amount to convert (say currency in dollars) and display the converted amount (say currency in euros).

Keyword : - *Currency Exchange , Real Time etc….*

1. INTRODUCTION

An application is to be developed to represent dynamic functionalities like online currency converter. The application can simultaneously convert to currency using an online information source.

Different countries use different currencies and these currencies change daily compared to each other. Those who have transferred money (one currency to another) from one country to another must be updated with the latest currency exchange rates in the market.

With this in mind, the Currency Converter project has been created. This is just an app development like a calculator using Python. In this application, there are regular updates about each country's currency by which it reflects the current currency market value and conversion rate.

Such an application can be used by any user, but it is mainly useful for business, shares and finance related areas where money transfer and currency exchange takes place daily.

In this currency converter app, users are given the option to choose the type of conversion, i.e. "this" currency to "to" currency. This simple feature allows users to enter the amount to convert (say currency in dollars) and display the converted amount (say currency in euros).

Real Time Currency Converter converts user-assigned currency into just one currency. It shows the real-time rate of the currency if the Internet provides Internet connectivity and the final updated price of the currency if the Internet does not provide Internet connectivity.

2. LITERATURE SURVEY

Sergio Bianchi, Alexandre Pantanella, and Augusto Pianese, "Modeling and Simulation of Currency Exchange Rates Using Multifractional Process with Random Exponent"[1], In this work, we propose simulation algorithms capable of replicating a special time series related to the FMS market, assuming a multilingual process model with a random exporter (MPRE). We show how to properly select the functional parameters of the MPRE, how the simulated series fits with significant accuracy in real estate. It is beneficial to underline that knowledge of functional parameters alone ensures that surrogates succeed in copying empirical data. The results can be used in situational analysis as well as in estimation.

Dr. S. Kumar Chandar, Dr. M. Sumathi, Dr S. N. Sivanandam, "Forecasting of Foreign Currency Exchange Rate Using Neural Network" [2], The foreign exchange market is the largest and most important in the world. Foreign exchange transactions are the simultaneous sale of one currency and the purchase of another currency. It is essential for currency trading in the international market. In this paper, we have examined predictive modeling based on artificial neural techniques based on foreign exchange rates using five different training algorithms. The model was trained using historical information to estimate the four foreign exchange rates against the Indian rupee. Predictive performance of the proposed system is performed using statistical metrics and compared. From the results it became clear that the new approach provides a technique to improve foreign exchange rate forecasting. It is also an effective tool and can be predicted significantly closer using simple design. Out of the five models, the Levenberg-Markart based model lags behind the other models and achieves comparative results. It also demonstrates the power of the proposed approach and makes more accurate predictions. Finally, the proposed scheme can significantly improve estimation performance when calculated on three commonly used metrics.

Yoke Leng Yonga, Yunli Leea, Xiaowei Gu, Plamen P Angelov, David Chek Ling Ngo, Elnaz Shafipour, "Foreign currency exchange rate prediction using neuro-fuzzy systems"[3], The complex nature of the forex market has led to extensive research on a variety of academic topics. By incorporating more in-depth analysis and forecasting methods, traders will be able to make informed decisions when trading. This paper therefore proposes an approach to incorporate the use of historical data with computer intelligence for analysis and prediction. First, the Gaussian mixing model method is applied for data segmentation on historical observations. The eastern part of the NYA type neuro-fuzzy system is initiated by the splitting result, while the resulting part is trained using obscure weighted RLS algorithms based on the same data. Numerical examples based on actual currency exchange data show that the proposed approach, trained with historical data to predict future foreign exchange rates in the long run, yields promising results. Although implemented in an offline environment, it could potentially be used in real-time applications in the future.

Minakhi Rout, Babita Majhi, Ritanjali Majhi, Ganapati Panda, "Forecasting of currency exchange rates using an adaptive ARMA model with differential evolution based training"[4], Soft and evolutionary computer-based techniques have been introduced in the literature to overcome the limitations of statistically based methods of estimating exchange rates. To conduct research in this direction, this paper proposes a simple but promising hybrid estimation model by combining Autoregressive Moving Average (ARMA) architecture and Differential Evolution (DE) based training adapting its feed-forward and feed-back parameters. Simple statistical features for each exchange rate are extracted using the sliding window of the previous data and the forecast model is assigned as input to train its internal coefficients using the de optimization strategy. The effectiveness of the prediction is measured using previous exchange rates not used for training purposes. Simulation results using real-life data are presented for three different exchange rates for one-fifteen months 'further predictions. The results of the developed model are compared with four other competitive methods such as ARMA-Particle Swarm Optimization (PSO), ARMA-CAT Swarm Optimization (CSO), ARMA-Bacterial Forging Optimization (BFO) and ARMA-Forbic. The derivative-based ARMA-FBLMS forecast model exhibits the worst performance of the exchange rate. A comparison of different performance measures with the training duration of all three evolutionary computer-based models shows that the proposed ARMA-DE exchange rate forecast model holds higher short- and long-range potentials than others.

3. PROBLEM STATEMENT

Creating a real-time currency converter that will take data from authenticated sources that are looking to invest abroad or perhaps going on holiday will reduce the time it takes to serve customers and they need local currency to buy goods.

4. ARCHITECTURE
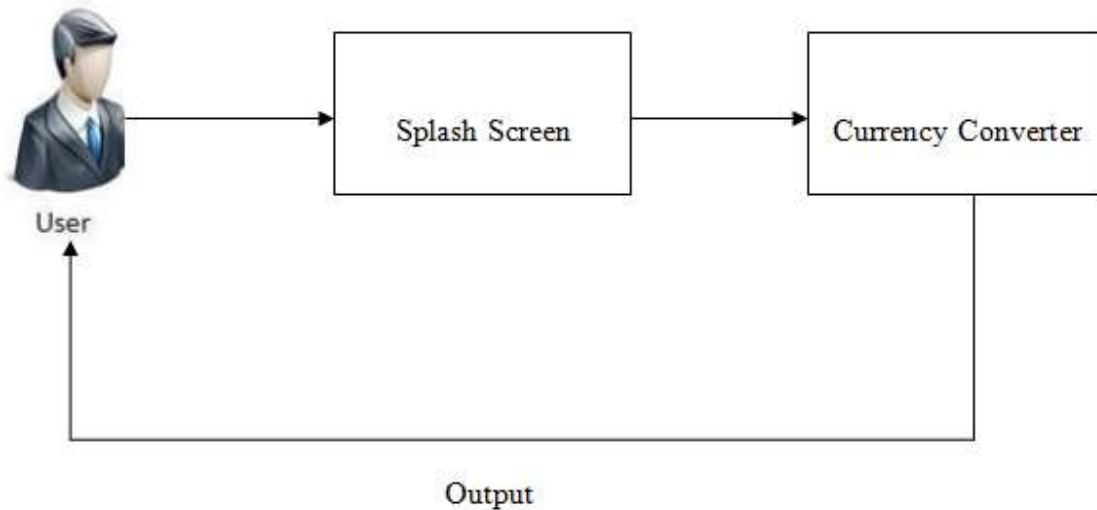
Fig -1: Architecture of Real Time Currency Converter

In this architecture, when the user opens the app, first of all the splash screen will open and the data will be refreshed. If an internet connection is available, an online currency converter with current currency values will be shown. Otherwise, no internet connection is available, the currency conversion will be displayed with the user's permission, and the currency values will be higher than the values last updated.

5. MODULE DESCRIPTION

1. Splash screen

        First when we open the app a splash screen will be displayed and if internet connection is available it will fetch current i.e. real time currency and if internet connection is not available it will fetch last updated currency valley.
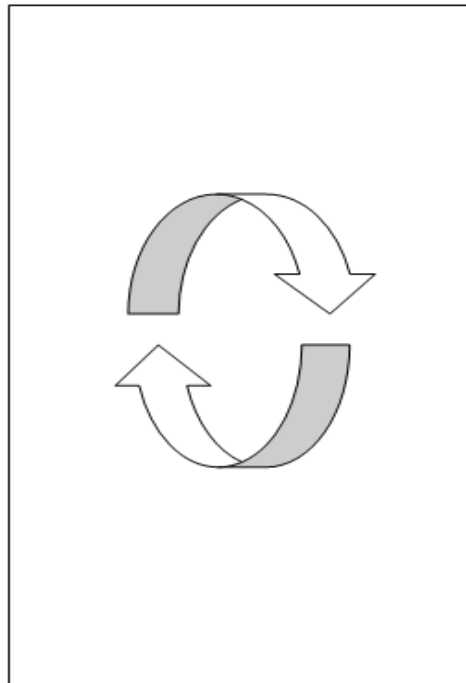
Fig -2: Splash Screen

2. Offline Currency Converter Screen

If the user does not have internet connection then this version will appear then user can convert values but it will be modified values at last.

Fig -3: Offline Currency Converter

3. Online Currency Converter Screen
   This screen will appear when the user has internet access and will be a real time updated currency convert and get it.

Fig -4: Online Currency Converter

6. REFERENCES

[1]. Sergio Bianchi, Alexandre Pantanella, and Augusto Pianese, "Modeling and Simulation of Currency Exchange Rates Using Multifractional Process with Random Exponent", International Journal of Modeling and Optimization.
[2]. Dr. S. Kumar Chandar , Dr. M. Sumathi, Dr S. N. Sivanandam, "Forecasting of Foreign Currency Exchange Rate Using Neural Network", Dr. S. Kumar Chandar et al. / International Journal of Engineering and Technology (IJET).
[3]. Yoke Leng Yonga, YunliLeea, XiaoweiGu, Plamen P Angelov, David Chek Ling Ngo, Elnaz Shafipour, "Foreign currency exchange rate prediction using neuro-fuzzy systems", INNS Conference on Big Data and Deep Learning   2018
 [4]. Minakhi Rout, Babita Majhi, Ritanjali Majhi, Ganapati Panda, "Forecasting of   currency exchange rates using an adaptive ARMA model with differential   evolution based training", King Saud University Journal of King Saud University –Computer and Information Sciences.