CHAPTER 2 LITERATURE

Current years ,for predicting the FOREX accurately,we have seen loads of various technologies that have been adopted.Although more and more new advanced models are coming on the road,which are based on machine learning methods.There are some models only including one processing craft.However,according to the research of Said,Omar,and Aziz,they utilised blend models to apply the procedure that predicted FOREX market.(S. Achchab..et 2017).It is certain that the ARMA(autoregressive motivating average) motivated their model and their dataset derived from historical data USD/EUR and (JYN, EUR and BRP) variations. There are four regression algorithms which were trained by them: Multiple linear regression, Support vector regression, Partial Least Squares regression and CRT regression tree.Then they input weights of these algorithms to the Cuckoo Search algorithm. Their model outwit other regression algorithms,because the results were processed by MLR(multiple linear regression) beyond SVR,PLS and CRT(P. Yaohao,.et 2019)(B.M. Henrique,.et 2018).Another hybrid model was evolving by Abdul Raziq,Naveed Sheikh and Abdul Rehman (Abdul Raziq,.et 2024) for enhancing Foreign Exchange volatility forecasting.They integrated CEEMDAN(Complete Ensemble Empirical Mode Decomposition with Adaptive Noise) and IMFs(intrinsic mode functions) which were merged with GARCH (Generalized Autoregressive Conditional Heteroskedasticity) and EGARCH (Exponential Generalized Autoregressive Conditional Heteroskedasticity).Then they applied these models into DL models to forecast exchange rate volatility.During their research,they optimised the hyperparameters for the Deep Learning by using Optuna algorithm. Their proposed model verified the volatility of PKR/USD currency pairs. Furthermore,they also discovered that the Optuna approach exceeded the PSO method regarding facilitating accuracy and decreasing time consumption.

On the other hand,there

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