

PERSONAL EXPENCE TRACKER

ABSTRACT

With a fast-paced lifestyle these days, people frequently forget to manage their budgets. Some people may overspend, while others may not have enough money in their budget to purchase their basics because they overspent on other items. being certain making a specific budget plan is essential to ensuring that consumers do not encounter any future financial difficulties. The purpose of the Expenses Tracker System is to monitor users' spending and produce a monthly forecast for their budget. The system need to be capable of producing reports of their spending and alert consumers when they go over their spending limit. The system was created to be dynamic since it employed the least squares method to create prediction. The system also offers users' private data, their earnings, and users should be notified if they have gone over their budget by the system, which should be able to provide reports of their expenditure. Since the prediction was made using the least square method, the system is intended to be dynamic. Users' personal information, income, and expenses are also provided via the system. A method for helping consumers better and more effectively manage their spending is the expenses tracker system.

INTRODUCTION

For a very long time, managing finances and accounts has been a real problem. People are less inclined to use spreadsheets or chequebooks to track their spending. Despite this, modern technology and the internet's increasing accessibility have given it a new viewpoint during the past few decades.

We can track our spending with the use of an expense tracker. Additionally, it can assist us in identifying spending patterns and keeping track of forthcoming bill payments. It is a web-based programme that can monitor their expenditure and ascertain whether they are staying within their allotted budget. The necessary information, including the expense amount, merchant, category, and date the expense was made, must be entered by potential users. This mobile system is a comprehensive expense tracking tool that will not only assist users in keeping tabs on their spending but also reduce unnecessary spending, hence promoting a responsible lifestyle.

LITERATURE REVIEW

Introduction

This chapter will be focusing on the work or research that are related either directly or indirectly to this project. This part is very important for the development of the project as it works as a guideline. It is an evaluative report of studies found in the literature that related to the selected area. Besides, by studying and understanding the researches, it will help in determining the best approach for the system development.

Related Research And Technique

Some research and journals have been reviewed throughout this project to make out a distinct image of it. These journals in short, works as a guide for this project to implement Least Square Method. Based on article [4], it discusses about regression models. Basically, it holds a concept where we forecast the time series of interest at y-axis assuming that it has a linear relationship with other time series at x-axis. The author [4] also stated that, the least squares principle provides a way of determining the coefficients effectively by minimizing the sum of the squared errors. A study carried out by author [9], it introduces tools and methods for both finance and accounting that help with asset pricing, corporate finance, options and futures, and conducting financial accounting research. How least square method works and implied in financial forecasting is discussed. The author [2] applied several of statistical time series models to observe forecast errors in the demand of juice production are within the expected limit and to choose a forecasting technique which has a less relative error. The author [2] proved that Least Square Method is more accurate than the others. Article [3] also did the study in order to forecast milk production in India using statistical time series modeling- Double Exponential Smoothing and Auto-regressive Integrated Moving Average and concluded that Auto Regressive Integrated Moving Average performed better. 8 In a paper studied by [7] explains that Batch-mode Least Squares SVM (LSSVM) is often associated with unbounded number of support vectors (SVs). This, makes it unsuitable for applications if it involves large-scale streaming data. In this paper [7], it explains how to train the limited-scale LSSVM dynamically. By applying a budget online LSSVM (BOLSSVM) algorithm, methodologically, by setting a fixed budget for SVs, LSSVM model is updated according to the current SVs set dynamically without re-training from scratch. This way, the proposed

BOLSSVM algorithm is especially useful for online prediction tasks. Thus, batch-mode learning methods were compared, the computational complexity of the proposed BOLSSVM method is significantly reduced. The validity and effectiveness of the proposed BOLSSVM algorithm is shown by the experimental results of classification and regression on benchmark data-sets and real-world applications. The paper [10] aims to describe a computerized system that is able to predict the budget for the new year based on past budgets by using time series analysis. It will then show results with most minimum errors and controls the budget during the year. Through the ability to control exchange, compared to the scheme with the investigator and calculating the deviation, measurement of performance ratio and the growth of a number of indicators relating to budgets, it is possible to achieve the objective. For example, this article [10] uses the rate of condensation of capital, the growth rate and profitability ratio and gives a clear indication whether these ratios are good or not.

Related Software

One of the most common existing software that is related to this project is MINT. Mint was formally introduced in September 2007. it is a server-based web, but this software also can be used using PC or smart-phone. Based on a research from author [1], MINT is aware of users' daily expense and if they have a future goal of buying something, user can reduce your current spending according to it. Most importantly, it keeps a track on users' credit bills, home bills and savings. This budgeting software also will notify users whenever user are due to pay a bill or payment. This will lower the chance for users to forget to make payment. Despite having some great advantages, MINT also comes with a plenty of drawbacks such as there no guarantee of the security in this online software. The chances of getting their account hacked is worrisome as this software stores users' financial account. The rivalry from other potential software also becomes one of the big factor. Website has too many ads while browsing through finances.

Conclusion

In conclusion, the selection of accurate technique is very important to make sure that the system successfully implemented and achieved the objective. The selected technique is artificial neural networks that can be able to predict the financial forecast correctly. Based on the research study, it can be conclude that the cloud computing works is suitable for Expenses Tracker System.

Tracking the daily expenses can not only help in saving money but also help in setting financial goals for the future. If we know where our money is being spent every day, it is easy to set some cutbacks and such to help reduce expenditure. This project is developed to work more efficiently in comparison to other trackers and avoid manual calculation. It is developed to be efficient and look attractive at the same time.

We have developed a mobile application that Keeps track of all of your daily transactions, keeps track of your money lent or borrowed ,suggests you with the most effective investment options, offers your discounts in popular categories , view exchange and to read latest authenticated financial news. This paper's main aim to eliminate the use of sticky notes, spreadsheets and handling of large chunks of data is successful, the new experience is hasslefree and very handy. Now, with our application user can manage his expenses more effectively. This application can also help digital marketing agencies in rolling out their advertising campaigns more effectively.

As a part offurther research, we considered adding certain features to create more enhanced experience to the user .We are also going to link this profile with their mobile number, email account, social networks so that the application offers portability, other features to be added are discussed above below within the future enhancement section. The application delivered efficiently in calculating split expenses and recording the expenses together accurately with date and time

REFERENCES

- [1] Morgan L. (2017). Why Do People Think Mint is Bad For Budgeting. Investing Education.[online] Retrieved from: <http://www.investinged.com/why-do-people-think-mint-is-bad-for-budgeting/> [Accessed 1 April 2017].
- [2] Kumar, R and Mahto, D 2013, 'A case study : Application of Proper Forecasting Technique in Juice Production', Global Journal of Researches in Engineering, vol. 13, no. 4, pp. 1-6
- [3] Pal, S, Ramasubramanian, V and Mehta, SC 2007, 'Statistical Models for Forecasting Milk Production in India', Journal of Indian Society of Agricultural Statistics, vol.61, no.2, pp. 80-83.
- [4] Hyndman, R. J., & Athanasopoulos, G. (2018). Forecasting: Principles and Practice.
- [5] Thanapal, P., Patel, M., Lokesh Raj, T., & Satheesh Kumar, J. (2015). Income and Expense Tracker. Indian Journal Of Science And Technology, 8(S2), 118-122.
- [6] Chauhan, B. D., Rana, A., & Sharma, N. K. (2017, September). Impact of development methodology on cost & risk for development projects. In 2017 6th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions)(ICRITO) (pp. 267-272). IEEE
- [7] Jian, L., Shen, S., Li, J., Liang, X., & Li, L. (2016). Budget online learning algorithm for least squares SVM. IEEE transactions on neural networks and learning systems, 28(9), 2076-2087.
- [8] Gaither, G. H., Dukes, F. O., & Swanson, J. R. (1981). ENROLLMENT FORECASTING: USE OF A MULTIPLE-METHOD MODEL FOR PLANNING AND BUDGETING. Decision Sciences, 12(2), 217-230.
- [9] Lee, C. F., Chen, H. Y., & Lee, J. (2019). Econometric Approach to Financial Analysis, Planning, and Forecasting. In Financial Econometrics, Mathematics and Statistics (pp. 125-157). Springer, New York, NY.
- [10] Elbasheer, F. A., & Samani, A. T. (2014). Forecasting Budget Estimated Using Time-Series. Intelligent Information Management, 2014, 6, 142-148, Published Online May 2014 in SciRes. <http://www.scrip.org/journal/iim>.