

Implementing Finanzerverse – The Personal Finance Manager

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Abstract

The administration of a person's financial resources, such as their income, expenses, assets, and liabilities, is referred to as personal finance. It entails making wise choices about how to deploy funds in order to reach financial objectives like retirement savings, debt repayment, or property ownership. Budgeting, saving, investing, insurance, paying taxes, and retirement planning are just a few of the many issues covered by personal finance. To make wise decisions regarding how to handle money successfully, it requires understanding financial ideas and techniques. In order to become financially free, personal finance is crucial. In today's fast-paced world, managing money well through good planning, organization, directing, and control is the key to making wise financial decisions. People can increase their financial literacy and make wise financial decisions by learning about personal finance topics like debt reduction, investing, and debt reduction. Increased financial stability, better money management, and more investment options can result from sound personal finance habits. Without careful planning, we would be stuck, confused of how to pay off our bills and credit cards while also making our payments on time. A workable solution to this issue is to create an interface that will enable users to acquire insights into their personal finances in order to complete tasks like tracking, analysing, planning, and other similar activities. This interface will be helpful for all regular people. With this app, managing your funds has never been simpler or more pleasurable. It will assist you in allocating your revenue to a realistic budget.

Keywords: Personal finance, good planning, visualization, financial independence, analysis, investment

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I. INTRODUCTION

Finance management is the strategic planning and management of a person's or an organization's financial resources. Its goal is to more effectively match the financial position with the goals and objectives of both parties. Depending on the size of the firm, finance management seeks to maximize shareholder value, make profit, reduce risk, and safeguard the company's long- and short-term financial health. Dealing with people in the realm of finance management may involve planning for retirement, college funds, and other personal assets. Taking charge of your finances is the best method to reach your goals in life. An exhaustive summary of all your revenue, including that from your employment and any side hustles or assets, may be found in your budget. Personal financial management is the process of fully knowing your financial condition in order to make the most of your resources for both short- and long-term planning.

You'll be more conscious of where and how you're spending your money once you start managing your finances. This can help you stick to your budget and save more money. You'll also learn the principles of personal financial management, which will aid in money management and the achievement of your financial goals. It might therefore help you create a sound financial mindset and make wise investments. You might want to accomplish some financial objectives as quickly as feasible. But some of them might take ten years or more to complete. Hence, it's imperative to start and maintain a secure financial future as soon as is practical. Making a budget is one of the steps you must take to launch your personal financial management approach.

The one step that makes reaching all other financial goals possible, despite the fact that it might not seem exciting, is this one. Personal financial management is now simpler than ever thanks to technology. People may access a thorough dashboard that visualizes their financial data with the various graphs, which greatly aids in analyzing the trends of your incomes, expenses, and saving methods over time. Even while applying for a loan has grown standard, it can be intimidating when there is no prior planning. It is really helpful to know in advance the exact amount and due date for repaying the loan. The entire purpose of a budget is to detail every expense so you can understand where everything is going and, if needed, make adjustments to achieve your goals. A budget planner that examines spending to suggest a budget for particular costs and offers details on tax deductions, as well as a stock trend-moving average approach that aids in stock selection by letting the user know when to purchase or sell stocks. Users can view all of their unique financial goals on the website and take the necessary

steps to fulfil them. This website can aid people in developing a healthy financial mindset, making wise investments, and achieving their long-term financial goals by giving them a thorough picture of their financial status and the tools to manage it.

II. PROBLEM STATEMENT

The best way to accomplish your life goals is through managing your own finances. Beginners to financial planning need a way to be motivated to develop a positive habit of managing their personal finance as it is a hassle to keep track of them. Managing finances becomes quite a task when the user has all their financial data scattered and poorly organized.

Create a web application that assists the user in managing their personal finances with the help of a finance dashboard that will help the user visualize their data like saving, expenses, income with the help of various charts and graphs. The web application should also be equipped with a loan planner to assist the user in keeping track of their loans and a budget planner to help the user generate a plan according to their goal amount. The web application must also be equipped to aid individuals start investing in stocks or any similar investments. Using this web application the user can get a clear idea about their net-worth, their spending patterns and what they can do to improve their savings and overall balance their finances.

III. SCOPE

The dashboard can offer a visual and interactive summary of users' financial information, including their earnings, outgoings, savings, and investments. To gain a comprehensive picture of their money, users can import their financial data from several sources, including banks, credit card companies, and investment accounts. The loan planner may give consumers a thorough breakdown of how to repay their loans, including the monthly payment amount, interest rate, and time frame. Users can evaluate numerous loan options and check their eligibility for loans to choose the best one for their needs. The budget planner may examine users' spending and suggest a personalized budget based on their habits. Additionally, it can make suggestions for tax breaks that can enable customers to reduce their tax obligations.

The moving average approach can be used by the stock trend analysis tool to assist users in deciding whether to purchase or sell their stocks. Users may get useful information from it about the stock market, including trends, volatility, and possible investment possibilities. The application allows users to:

- Capture financial specifications.
- Manage financing custom attributes.
- Set up financial requirements traceability.
- Browse the financial requirements traceability graph.
- Comment and review financial requirement.
- Filter and search requirements.
- Analyze requirements coverage and impact of changes.

IV. PROPOSED SOLUTION

An easy and user-friendly interface would be provided to users of the suggested system for a personal finance website, enabling them to manage their funds with ease. The dashboard, which presents a summary of the user's financial data in an attractive format, would be the system's focal point. The dashboard might be tailored by users to show the data that matters to them the most, such as account balances, transactions, and investment performance.

One more crucial component of the website would be the loan planner. Users could submit information about their loans there, such as the amount, interest rate, and term of payback. The planner would then produce a comprehensive payment schedule that would show consumers how much they must pay each month, how much interest they will accrue during the loan's term, and how much money they must repay altogether. Users could analyse their spending habits and get budget recommendations from the budget planner. Users might use it to learn how much they spend on entertainment, groceries, and other categories, for instance. It would also contain information on how to secure tax deductions in order to save money. Users could utilise this functionality to better understand their spending patterns and make more informed decisions about how to spend their money.

The suggested system has a special feature called the stock trend-moving average method that would let users know when to buy or sell equities. A well-liked trend-following indicator that aids investors in determining the general market trend is the moving average. This indicator would be used by the stock trend-moving average approach to assist consumers in making better investment choices.

V. METHODOLOGY & FLOWCHART

1. Data collection: The website will gather financial information from the user, such as their income, expenses, loans, and investments.
2. Data analysis: Specifically, the Python programming language and libraries like NumPy and Pandas will be used to analyse the gathered data. As part of the data analysis, patterns will be found, loan repayment schedules will be calculated, and budget suggestions will be made.
3. Dashboard development: The website will have a dashboard that displays financial facts about the user in a simple and user-friendly way. The financial situation of the user will be depicted in charts and graphs on this dashboard.
4. Loan planner: Based on the user's loan amount, length, and interest rate, the website's loan planner will develop a detailed plan for their loan repayment. The loan planner will also have a section where users can see whether they are eligible for loans.
5. Budget planner: Based on the user's income and eligibility for tax deductions, the website will analyse their expenses and suggest a budget for each component. For each expense component, the user can enter their chosen budget allocation.
6. The website's stock trend-moving average technique makes use of the Python computer language and modules like Plotly Express to spot market trends. The user can utilise the moving average approach to determine when it is optimal to buy or sell stocks.
7. User interface: Streamlit, an open-source app framework for data science and machine learning, will be used to design the website. Users will be able to access and use the website's numerous functions with ease thanks to the user interface's simplicity and friendliness.

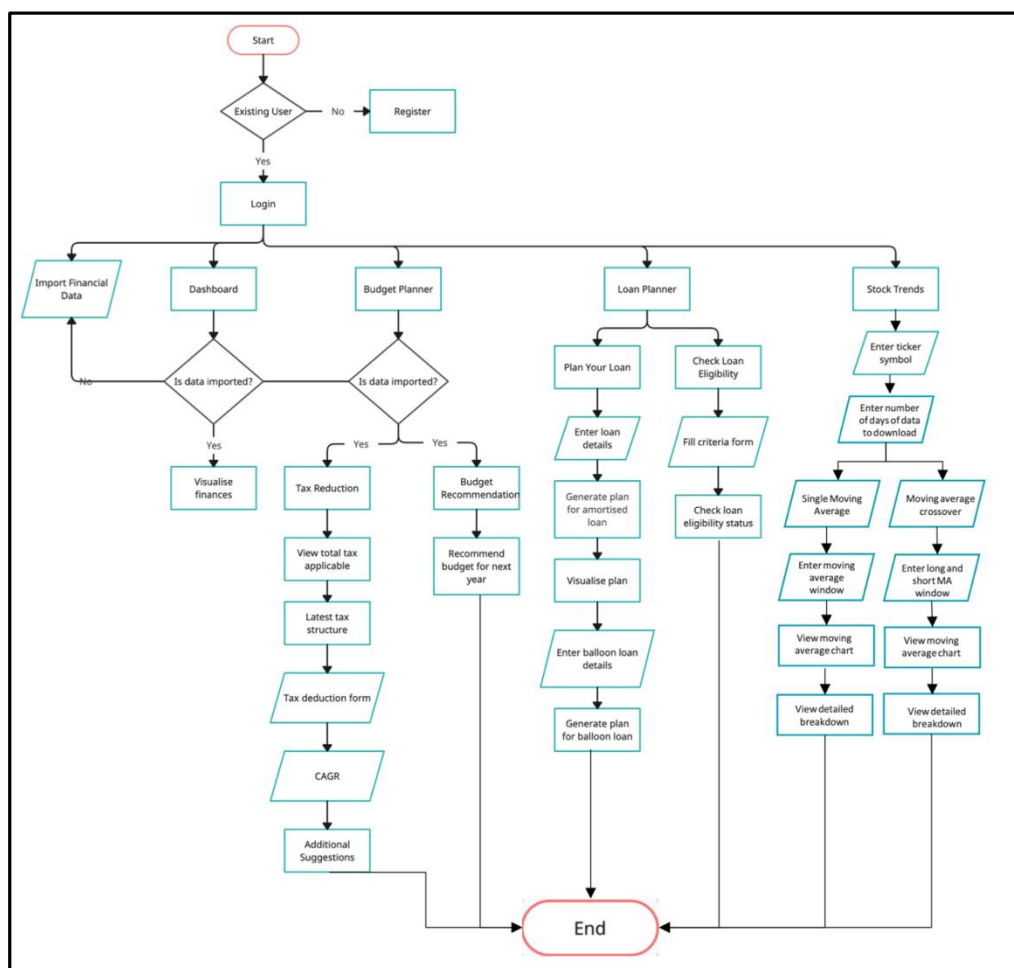


Figure 1: Flowchart

VI. IMPLEMENTATION

1. This application is made using Python language and Streamlit framework.
2. First we created Landing page using Streamlit Components and HTML.
3. We used Hydrant Component a Streamlit supporting library to create the Navigation bar.

4. For Login and Signup pages we used a Streamlit authenticator library taking advantages of its in-built authentication.
5. About Page gives an overall view of our project and it also has a contact us feature which allows the user to send us any queries regarding our project.
6. The File upload feature allows the user to upload CSV file in the given format
7. Dashboard provides insights of all the data provided in the CSV file that was uploaded by the user. Visualizations are created using Python libraries like Matplotlib and Plotly. The are filtering features available to filter the time and components using Streamlit Component.
8. Loan Planner is further divided into two components
 - a) Generate loan plans: The loan plans can be generated for two types of loans Amortized and Balloon Loan. The user has to enter the principle amount, interest and the time period then we also provide with the detailed breakdown along with it's visualization.
 - b) Check loan eligibility status: This is a ML model where the model is trained used logistic regression. The model is trained on the past data of marital status, education qualification, applicant's income etc. The user will provide their criteria in the form given and depending on that criteria the user will be granted loan or not.
9. Budget Planner is further divided into two components
 - a) Tax Reduction: Depending on the financial details uploaded by the user the total tax for that financial year will be calculated. Next we created tax reduction form by which the user will be able to know the total tax deduction applicable to them user various sections sanctioned by the Government of India. We implemented a CAGR calculator and that calculates the percent return on an investment. We also added additional suggestion schemes where the user could invest and save on taxes.
 - b) Budget Recommendation: This is a ML model where the model is trained used decision tree model. The model is trained on the data uploaded by the user. It filters the component wise expenses of the user throughout the years and recommends a budget for the upcoming year.
10. Stock Trends: This components gives overall trends of the stock prices over the given period of time and assets the user to identify where to buy and sell stocks. We have used yfinance library to download the real time stock data based on the ticker symbol given by the user. We have also created buying and selling signals by charting the stock data along with the moving average. We have implemented two moving average strategies: Single moving average and moving average crossover and also added the option to enable short selling. A detailed breakdown of the of the stocks like its opening, closing value etc is also provided which will help the user make an informed decision.

VII. RESULTS

User Account Management:

- a. User Registration: New user can sign up and create their account.
- b. User login: Existing users can login into their accounts

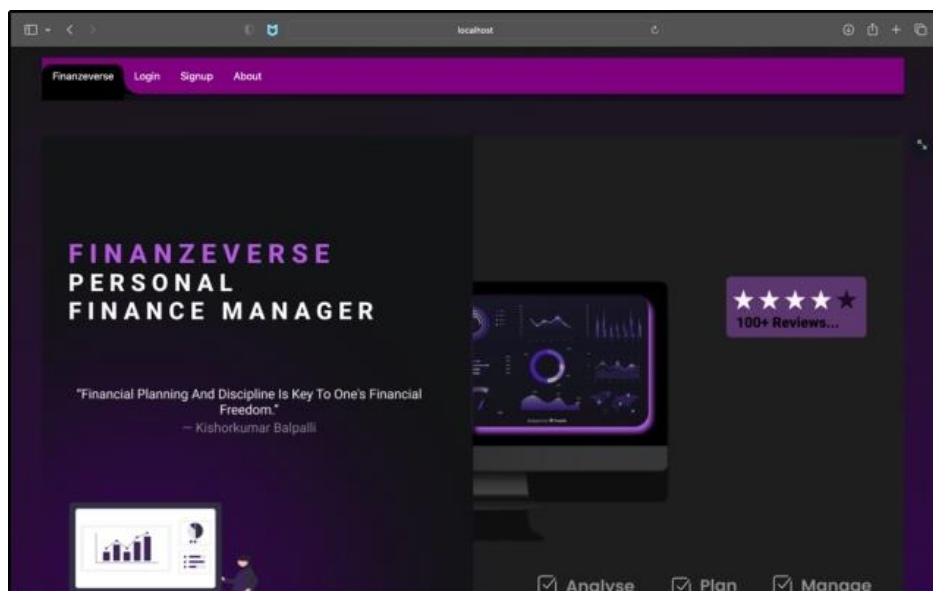


Figure 2: Finanzeverse Home Page

The screenshot shows the 'Signup' page of the Finanzeverse web application. The page has a dark purple background. At the top, there is a navigation bar with links for 'Finanzeverse', 'Login', 'Signup', and 'About'. The 'Signup' link is highlighted. Below the navigation bar, there is a 'Signup' form with the following fields: 'Email', 'Username', 'Name', 'Password', and 'Repeat password'. Each field has a corresponding input box. The 'Password' and 'Repeat password' fields have a small eye icon to toggle visibility. Below the 'Repeat password' field is a 'Register' button. To the right of the form, there is an illustration of a person standing next to a large smartphone displaying a login screen, with a padlock icon and a hand pointing at the screen.

Figure 3: User Registration Page

The screenshot shows the 'Login' page of the Finanzeverse web application. The page has a dark purple background. At the top, there is a navigation bar with links for 'Finanzeverse', 'Login', 'Signup', and 'About'. The 'Login' link is highlighted. Below the navigation bar, there is a 'Login' form with the following fields: 'Username' and 'Password'. Each field has a corresponding input box. The 'Password' field has a small eye icon to toggle visibility. Below the 'Password' field is a 'Login' button. Below the login form, there is a message box that says 'Please enter your username and password'.

Figure 4: Login Page

Import financial information:

In order to make the best use of Finanzeverse the user must import their financial data.

The data needs to be in the specified format for the web application to process it. The only thing necessary is the “Type”; meaning that user’s financial data must have Income, Expenses and Savings.

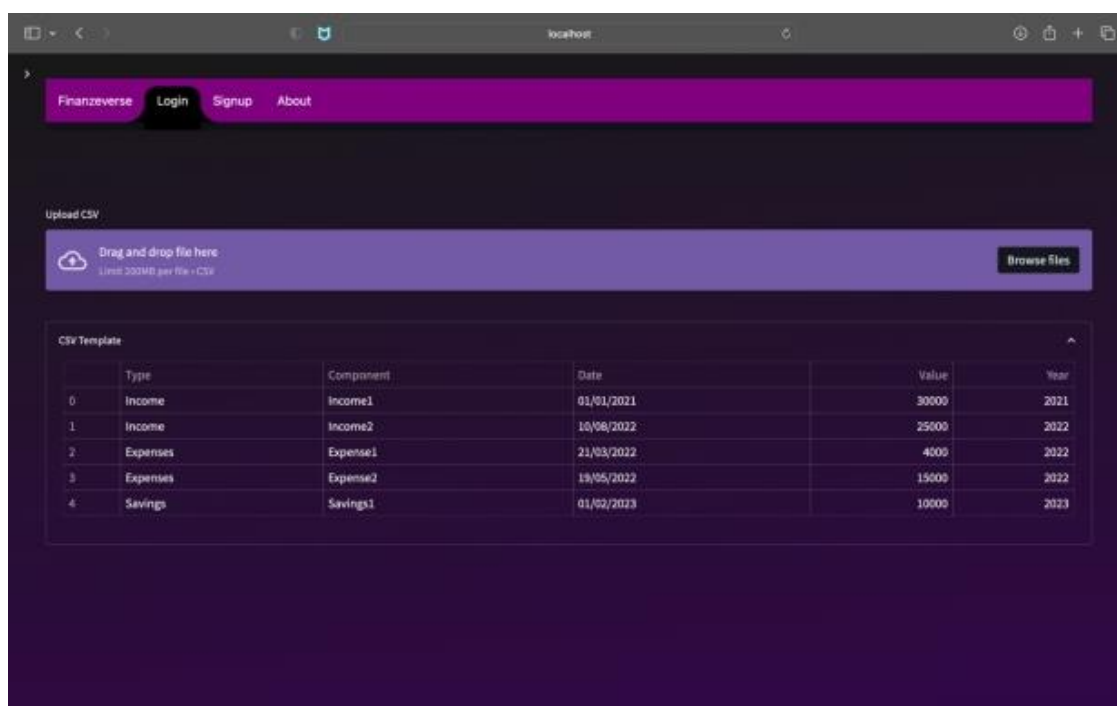


Figure 5: Upload Data

Dashboard

The financial data uploaded by the user will be processed. The dashboard component of Finanzerverse will provide insights in the form of data visualization.

This component will be especially beneficial to those who want to view many years' worth of financial data at a glance like view how much they spent on rent in the year 2020 or view the trend of income and expenses for individual components throughout the years.

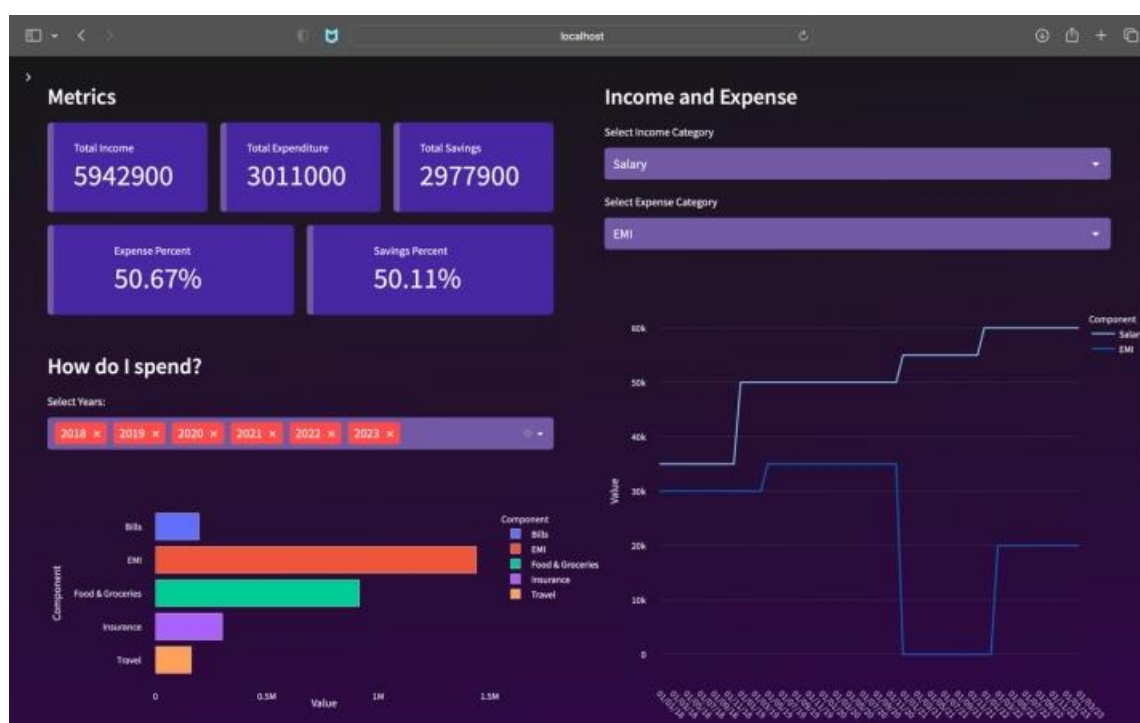


Figure 6: Dashboard part 1

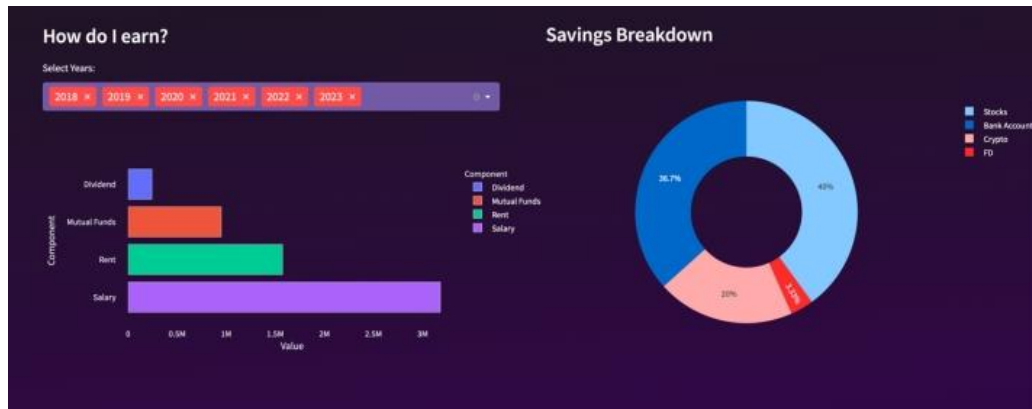


Figure 7: Dashboard part 2

Loan Planner

This component is divided into two parts:

1. Plan your loans
2. Check loan eligibility status

Plan Your Loans:

You can generate plans for two types of loans:

1. Amortized Loans: To fully repay the loan by the end of the loan period, an amortized loan requires the borrower to make consistent payments that include both principal and interest.
2. Balloon Payment Loans: For the duration of the loan, the borrower must make small regular payments; however, the remaining balance must be paid in full of a sizable "balloon" payment made at the conclusion of the loan term.

With the help of loan planner, the user will be able to get a details plan for their loans by entering loan details like:

1. Principal amount
2. Rate of interest
3. Loan Terms

An in-depth plan that can be downloaded will be created that informs the user on the following:

- Monthly payment
- Interest Amount
- Remaining Principal
- Total Amount
- Interest Monthly Ratio

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Amortized Loan: Paying Back a Fixed Amount Periodically

Principal Amount

100000

+

-

Interest Rate

0.05

+

-

Term (in months)

120

+

-

Monthly Installment: 1061

Total amount paid at the end of the loan period: 127279

Show loan breakdown per month

Loan breakdown per month

Month	Monthly Payment	Interest Amount	Remaining Principal	Total Amount	Interest Monthly Ratio	
1	2	1,060.6552	413.9834	98,709.3397	2,121.3103	0.3903
2	3	1,060.6552	411.2889	98,059.9735	3,181.9655	0.3878
3	4	1,060.6552	408.5832	97,407.9616	4,242.6206	0.3852
4	5	1,060.6552	405.8663	96,753.1127	5,303.2758	0.3827
5	6	1,060.6552	403.1380	96,095.5955	6,363.9309	0.3801
6	7	1,060.6552	400.3983	95,435.3387	7,424.5861	0.3775
7	8	1,060.6552	397.6472	94,772.3308	8,485.2412	0.3749
8	9	1,060.6552	394.8847	94,106.5603	9,545.8964	0.3723
9	10	1,060.6552	392.1107	93,438.0158	10,606.5515	0.3697
10	11	1,060.6552	389.3251	92,766.6857	11,667.2067	0.3671

Download data

Figure 8: Amortized Loans

The plan is also visualised in the form of graphs



Figure 9: Loan graph part 1

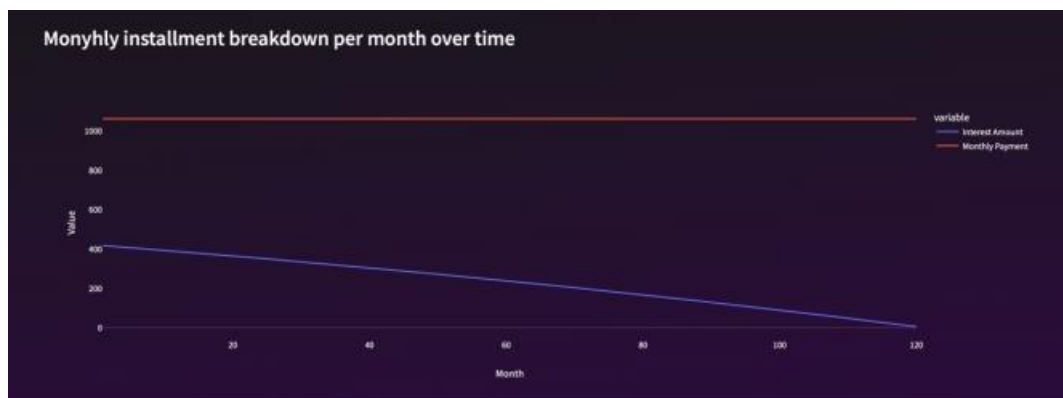


Figure 10: Loan graph part 2

Balloon Payment Loan: Paying Back a Lump Sum Due at Maturity

Loan Amount	Amortization period (in months)
200000	60
Interest Rate	Balloon Payment After (in months)
7	24

Calculate

Your fixed monthly payment is Rs. 3960.24 in the first 2.0 years, and then your last balloon payment will be Rs. 128258.16.

Thus, your total repayment amount is Rs. 365872.55, from which the total monthly payment is Rs. 237614.38, including a total interest payment of Rs. 165872.55.

Figure 11: Balloon Loan

Check Loan Eligibility Status

The criteria or standards that a borrower must meet in order to be qualified for a loan from a financial institution or lender are referred to as loan eligibility. These requirements typically take into account elements including the borrower's credit score, income level, employment situation, and financial background. The ability of a borrower to repay the loan and the level of risk associated with lending to them are determined by the lender using loan eligibility criteria. Lenders can assess if a borrower is a good candidate for a loan and what kind of loan and interest rate would be appropriate for them by examining loan eligibility. Depending on the type of loan, the lender, and the borrower's financial situation, different conditions may apply.

A machine learning model was trained using Logistic Regression on the data of whether a loan was approved or not to various people depending on various criteria like

- Gender
- Marriage status
- Number of dependents
- Education status

- Was the applicant employed or self-employed?
- Whether the applicant lived in a rural, semi-rural or urban area.
- The CIBIL score
- Applicant's income
- Co-applicant's income
- Loan amount
- Loan Duration

It was observed that married applicants had a higher chance of being eligible for a loan. Same goes with applicants with a high CIBIL score or those who lived in an urban area.

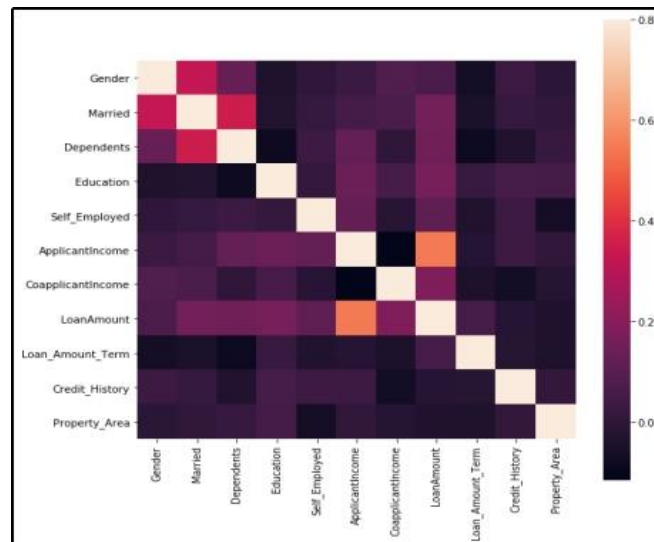


Figure 12: Heatmap of distribution of data

The trained model gives an accuracy of 0.75 and is able to predict whether an applicant will be eligible for the loan or not.

Figure 13: Loan eligible

Figure 14: Loan not eligible

Budget Planner

This component is divided into two parts:

1. Tax Reduction
2. Budget Recommendation

Tax Reduction

In India, lowering taxes may be a useful budget-saving tactic. Individuals can take advantage of tax benefits and lower their tax obligations by participating in tax-saving plans like Equity-Linked Savings Schemes (ELSS), Public Provident Funds (PPF), National Pension Schemes (NPS), and Unit-Linked Insurance Plans (ULIPs). Additionally, purchasing health insurance might help people budget their money more effectively in the event of a medical emergency. Hospitalization costs, critical diseases, operations, and other medical expenses are all covered by health insurance policies in India. A home loan can help people save money by allowing them to take advantage of tax savings on interest payments, while taking out an EMI-based car loan can help people acquire a car without having to pay a large upfront sum of money.

This component provides various ways a user can save through tax reduction. It includes features like:

1. Calculating the total tax applicable according to the user's income.
2. A tax deduction form where user can select various categories that apply to them and calculate the total tax that can be deducted.
3. A CAGR calculator: Compound annual growth rate is known as CAGR. The average annual growth rate of an investment during a given time period is calculated using this financial statistic. Taxes are not directly impacted by CAGR, but they may be indirectly impacted by the way it affects investment gains or losses.
4. Additional tax saver suggestions

	Income Range	Tax Applied
0	0 to Rs 2.5 lakh	NIL
1	Rs 2.5 lakh to Rs 5 lakh	5% above Rs 2.5 lakh
2	Rs 5 lakh to Rs 7.5 lakh	Rs 12,500 + 10% above Rs 5 lakh
3	Rs 7.50 lakh to Rs 10 lakh	Rs 37,500 + 15% above Rs 7.5 lakh
4	Rs 10 lakh to Rs 12.5 lakh	Rs 75,000 + 20% above Rs 10 lakh
5	Rs 12.5 lakh to Rs 15 lakh	Rs 125,000 + 25% above Rs 12.5 lakh
6	Above Rs 15 lakh	Rs 187,500 + 30% above Rs 15 lakh

Figure 15: Total tax applicable

Tax Deduction

☒ Health Insurance

Enter Value:

0

☐ Electric Car Loan

☐ Home Loan

☒ Home Rent

Are you residing in the rented property?

Yes

Have you received home rent allowance from your employer?

No

Enter rent per annum:

150000

Enter income per annum:

900000

☐ Student Loan

☐ Interest on Bank Account

☐ Disability, Dependent, Relatives

☐ Royalty Income

Tax: Deduction: 60000

Figure 16: Tax deduction

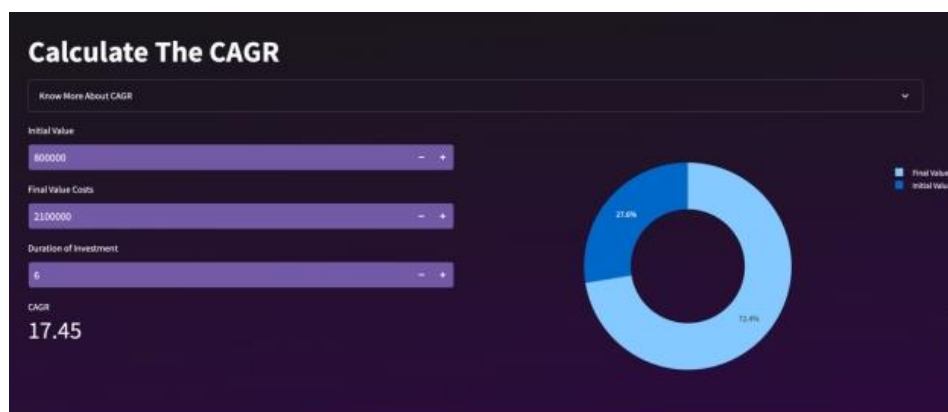


Figure 17: CAGR

Here are some investement suggestions to save your Taxes:

Disclaimer

PPF

[Click here to know more about PPF](#)

1.5 lakh

The current PPF interest rate is 7.1% (Q4 of FY 2022-23), the minimum investment tenure is fixed at 15 years while the investment amount can range between Rs. 500 to Rs. 1.50 lakh in a financial year.

National Pension System (NPS)

[Click here to know more about NPS](#)

2 lakh

NPS account tax benefits extend up to ₹2,00,000 per annum for each individual. As an investor, investing this amount will make you eligible to claim ₹1,50,000 tax deduction under Section 80C and an additional ₹50,000 under Section 80CCD(1B).

Sukanya Samriddhi

[Click here to know more about Sukanya Samriddhi](#)

1.5 lakh

The minimum annual contribution to the Sukanya Samriddhi Account is Rs. 250 and the maximum contribution is Rs. 1.5 lakh in a financial year. You have to invest at least the minimum amount every year for up to 15 years from the date of account opening.

Tax-Saving FD

[Click here to know more about Tax-Saving FD](#)

1.5 lakh

A 5-year term deposit is also called a Tax-Saving FD. If you invest in one, you are eligible for tax deductions under Section 80C of the Income Tax Act, 1961. You can claim up to a maximum of Rs.1.5 lakh.

A Senior Citizens' Saving Scheme (SCSS)

[Click here to know more about SCSS](#)

1.08 lakh

A Senior Citizens' Saving Scheme (SCSS) is a government-backed retirement benefits programme. Senior citizens resident in India can invest a lump sum in the scheme. Get

ELSS

[Click here to know more about ELSS](#)

1.08 lakh

ELSS funds are equity funds that allow you to save tax while you invest for your long term goals. Investment in these funds can be eligible for deduction under Section 80C. These dual benefits mean anyone looking to invest up to Rs. 1.5 lakh per month should only invest in this category.

Figure 18: Additional Suggestions

Budget Recommendation

The practice of reviewing a person's costs and establishing a budget for particular expenses is referred to as a budget recommendation based on expense components. As the user enters them in their finance sheet, the procedure entails identifying the various expenses and classifying them into categories like rent, food, transportation, entertainment, etc. The budget planner examines expenditure patterns after categorizing the expenses to find areas where savings might be made. For instance, the budget planner may suggest cutting back on entertainment costs if a person is spending a large amount of their budget on it, freeing up more money for savings or other necessary needs.

A machine learning model is trained on the finance sheet entered by the user. The expenses are filtered out and the model trains on every component. Based on the trend of expenses throughout the years, the model uses decision tree classifiers to make recommendations for budget for the next year.

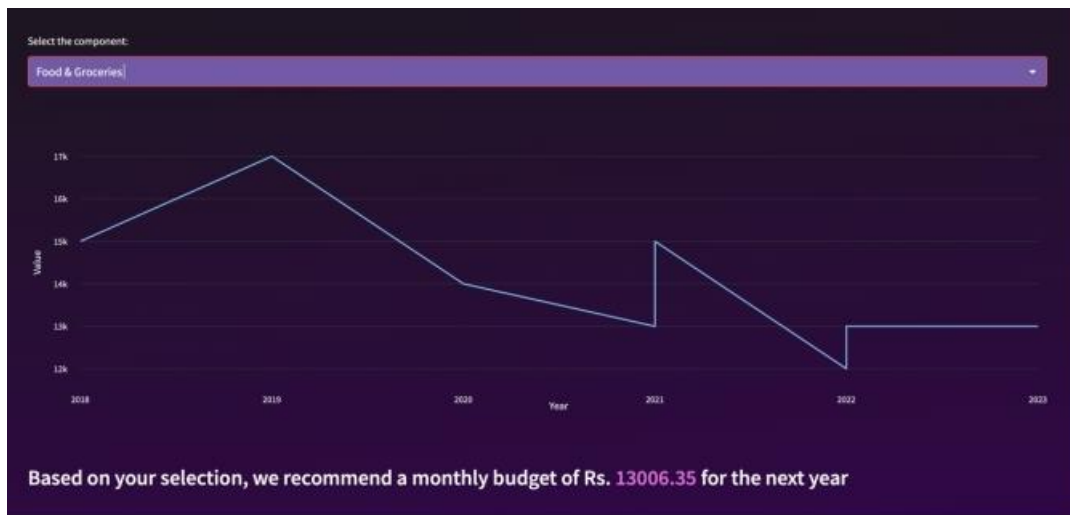


Figure 19: Budget Recommendation

Stock Trends

Stock trends describe the broad direction that the prices of a certain stock or the entire stock market are moving over time. Depending on whether the prices are steadily growing or declining, the patterns might be classified as bullish or bearish.

Moving averages are useful in analysing the trend of a stock or security over a period of time. Moving averages can aid people in identifying when to buy or sell a stock by providing a visual representation of the stock's price trend.

This component considers two types of moving averages:

1. Single moving average: A single MA is calculated by taking the average closing price of a stock over a specific period. When the stock's price is above the MA, it is considered to be in an uptrend, while when the price is below the MA, it is considered to be in a downtrend.
2. Moving average crossover: MA crossover is another popular method used by traders and investors to identify trends and potential reversals. When the shorter-term MA crosses above the longer-term MA, it is considered a bullish signal, indicating that the stock's price may continue to rise. Conversely, when the shorter-term MA crosses below the longer-term MA, it is considered a bearish signal, indicating that the stock's price may continue to fall.

Moving Average Analysis

Know more about Moving Averages

Please enter a ticker symbol
ONGC.NS

Please enter the number of days of data you would like
30

Select Strategy
☒ Single Moving Average
☐ Moving Average Crossover

Please enter your moving average window
5

Enable Short Selling
☒ Yes
☐ No

Figure 20: Moving average types



Figure 21: Moving Averages

Detailed Breakdown

	Open	High	Low	Close	Adj Close	Volume	5 day MA	Side	LagPrice	PctChange	buyPrice	sellPrice	Slippage	Return	Cumulative
2023-03-03T00:00:00	154.0000	155.7000	153.4500	154.2500	154.2500	8260104	154.0800	1	<NA>	0.0256	154.2500	<NA>	0.0030	-0.0030	-0.0030
2023-03-06T00:00:00	154.7000	159.7000	153.5500	158.2000	158.2000	14491522	154.6700	1	154.2500	0.0003	<NA>	<NA>	0.0000	0.0003	-0.0027
2023-03-08T00:00:00	156.5500	158.8500	156.4000	158.2500	158.2500	7339476	155.9100	1	158.2000	-0.0123	<NA>	<NA>	0.0000	-0.0123	-0.0150
2023-03-09T00:00:00	159.0500	159.1500	156.0500	156.3000	156.3000	5314022	156.2100	1	158.2500	-0.0032	<NA>	<NA>	0.0000	-0.0032	-0.0182
2023-03-10T00:00:00	155.6000	156.7000	154.2000	155.8000	155.8000	4689681	156.5600	-1	156.3000	0.0000	<NA>	155.8000	0.0030	-0.0030	-0.0212
2023-03-13T00:00:00	156.2000	158.0000	155.2000	155.8000	155.8000	8785721	156.8700	-1	155.8000	-0.0160	<NA>	<NA>	0.0000	0.0160	-0.0052
2023-03-14T00:00:00	155.8000	156.8500	153.0500	153.3000	153.3000	7177342	155.8900	-1	155.8000	-0.0049	<NA>	<NA>	0.0000	0.0049	-0.0003
2023-03-15T00:00:00	154.0000	154.4500	151.8000	152.5500	152.5500	9832270	154.7500	-1	153.3000	-0.0023	<NA>	<NA>	0.0000	0.0023	0.0020
2023-03-16T00:00:00	151.2000	153.4000	148.0000	152.2000	152.2000	18551936	153.9300	-1	152.5500	0.0062	<NA>	<NA>	0.0000	-0.0062	-0.0042
2023-03-17T00:00:00	153.5000	154.9000	151.9500	153.1500	153.1500	16593429	153.4000	-1	152.2000	-0.0056	<NA>	<NA>	0.0000	0.0056	0.0013
2023-03-20T00:00:00	153.0000	154.1500	151.6000	152.3000	152.3000	8749355	152.7000	-1	153.1500	-0.0049	<NA>	<NA>	0.0000	0.0049	0.0063
2023-03-21T00:00:00	153.1500	153.7500	150.9500	151.5500	151.5500	6148489	152.3500	-1	152.3000	0.0000	<NA>	<NA>	0.0000	0.0000	0.0063
2023-03-22T00:00:00	152.4000	152.8000	150.8500	151.5500	151.5500	4329409	152.1500	-1	151.5500	0.0082	<NA>	<NA>	0.0000	-0.0082	-0.0020
2023-03-23T00:00:00	151.1000	153.1500	150.3000	152.8000	152.8000	4484564	152.2700	1	151.5500	-0.0223	152.8000	<NA>	0.0030	-0.0253	-0.0272
2023-03-24T00:00:00	152.7000	153.2000	148.8000	149.4000	149.4000	8301726	151.5200	-1	152.8000	0.0057	<NA>	149.4000	0.0030	-0.0087	-0.0359
2023-03-27T00:00:00	149.5500	152.4500	149.2500	150.2500	150.2500	7437261	151.1100	-1	149.4000	-0.0203	<NA>	<NA>	0.0000	0.0203	-0.0156
2023-03-28T00:00:00	150.2500	150.2500	146.6500	147.2000	147.2000	8964539	150.2400	-1	150.2500	0.0146	<NA>	<NA>	0.0000	-0.0146	-0.0302
2023-03-29T00:00:00	147.2500	150.8500	146.3000	149.3500	149.3500	24012834	149.8000	-1	147.2000	0.0114	<NA>	<NA>	0.0000	-0.0114	-0.0416
2023-03-31T00:00:00	150.1000	153.0000	150.0500	151.0500	151.0500	7998472	149.4500	1	149.3500	0.0172	151.0500	<NA>	0.0030	0.0142	-0.0274
2023-04-03T00:00:00	154.5000	157.8500	153.1000	153.6500	153.6500	20016785	150.3000	1	151.0500	-0.0049	<NA>	<NA>	0.0000	-0.0049	-0.0323
2023-04-05T00:00:00	156.7500	157.3500	152.5500	152.9000	152.9000	15880397	150.8300	1	153.6500	-0.0150	<NA>	<NA>	0.0000	-0.0150	-0.0473

Figure 22: Detailed Breakdown

About us

This section gives information about us along with an option to contact us if any query arises.

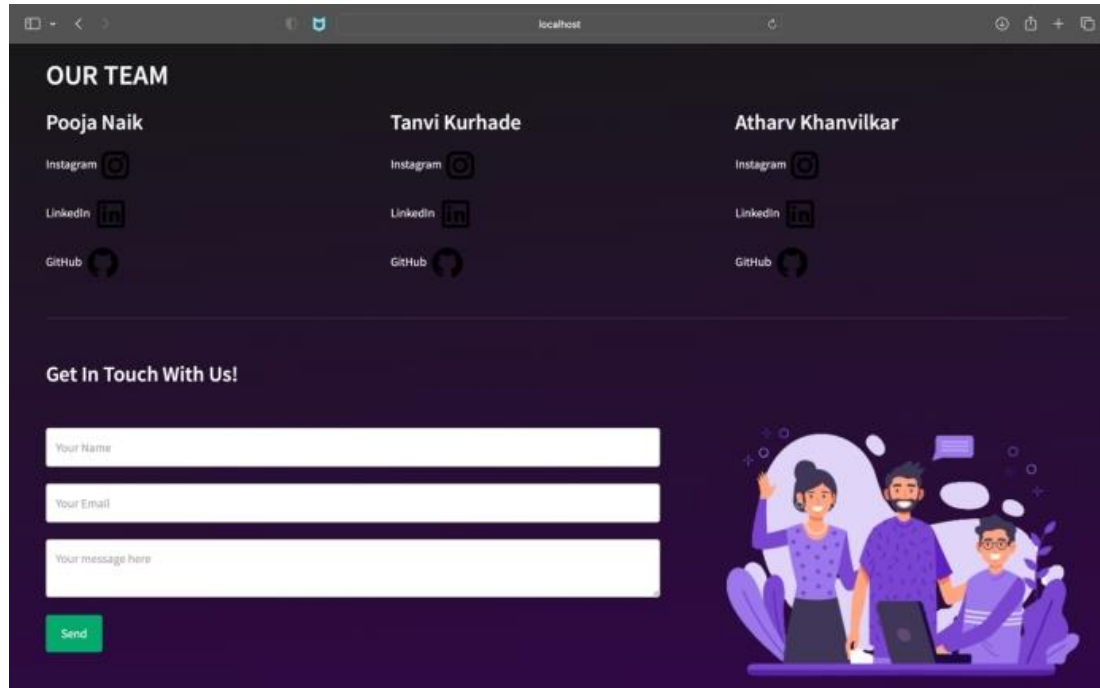


Figure 23: About us

VIII. CONCLUSION

Personal financial management can be challenging in the fast-paced and complex financial environment of today. Nevertheless, a personal finance website that provides a dashboard, loan planner, budget planner, and stock trend-moving average technique can assist users in taking charge of their money and making wise decisions.

Finanzerverse will be especially beneficial for those who have just started or aim to start managing their finances in an organized manner. Users will save time and effort by having a single platform to manage all of their financial activities. This platform will also aid users to improve their stock trading and purchasing decisions. Users can decide whether to buy or sell their stocks by analyzing historical trends, potentially increasing returns and lowering losses. Overall, this website aims to simplify financial management and help people achieve their financial goals.

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