Project Proposal Assignment

Project Title

MoneyMentor: AI Savings Assistant

Purpose and Elevator Pitch

Approximately 39% of students say that their financial decisions cause them stress, which results in worse academic performance (Hemmerdinger, 2023; Moore et al., 2021). Our project, MoneyMentor, is an AI-powered budgeting assistant designed to simplify financial management for students and young adults. By analyzing spending patterns and providing personalized savings recommendations, MoneyMentor helps users reduce financial stress and make smarter budgeting decisions to allow them to focus on their academic and personal goals.

User Profile

1. **Target Users**:
   - **Students**: Both high school and post-secondary students (ages 14 to 18) with limited budgets and are looking for a platform to help them in managing their finances.
   - **Young Adults**: Recent post-secondary graduates (ages 22 to mid-20s) new to managing their income/finances.
   - ***What do they have in common?***
     - Little to no financial literacy.
     - Struggles with bad financial decisions like overspending and unnecessary purchases.
     - Busy schedules and lifestyles.
     - Desire to improve and learn to become better financially.
     - Are financially stressed.
     - Desire to begin contributing to a savings account.
2. **Motivations and Problems**:
   - ***What motivates users to use your product?***
     - **Financial Education**: Users who are new to finances may have a hard time with terms and understanding certain financial concepts. MoneyMentor can help with educating users in these concepts, especially through the use of AI.

- **Tracking of Spending**: The app will help them track expenses effortlessly and gain control over their spending habits.
- **Convenience**: An easy to use, free, and simple app will provide users with a convenient way to manage their spending.
- **Use of AI**: The use of AI in MoneyMentor attracts users since it allows for real-time and continuous financial advice.
- **Personalized Recommendations**: By having the user log their spending data on the app, they can have personalized recommendations on future spending.

- *What problem(s) are you trying to solve for them?*
  - **Budgeting Challenges**: According to the Canadian Credit Union Association Cooperative, "a notable percentage of younger individuals delay major life decisions due to financial constraints" (2024). MoneyMentor can solve this problem by assisting users in developing various short-term and/or long-term financial goals.
  - **Self-control / Overcoming Bad Habits**: Users with bad financial habits can use MoneyMentor to overcome them and develop healthier habits related to their finances which will help them throughout their life.
  - **Analysis of Spending**: MoneyMentor can provide AI-driven spending analysis and predictive budgeting, helping users plan for upcoming expenses and assist in adjusting their spending patterns.
  - **Financial Advice**: Young adults "frequently report greater dissatisfaction with available financial planning services, underscoring the need for more customized financial advice" (Canadian Credit Union Association Cooperative, 2024). Having personal financial advice through MoneyMentor will be able to solve this problem.
  - **Financial Safety**: Many students and young adults lack funding in their emergency savings fund or do not have one opened (Canadian Credit Union Association Cooperative, 2024). MoneyMentor can guide them in starting one and set up a plan to slowly contribute up to a certain amount.

3. **User Persona**:
   - **Name**: Ethan Parker
   - **Gender**: Male
   - **Location**: Downtown Toronto, ON, Canada
   - **Age**: 20
   - **Quote**: "The library is life."
   - **Job Title**: Part-time barista at his local Starbucks

o **Income**: $125 * 6 shifts/month = $750/month, earning minimum wage and working various weekend shifts
o **Level of Education**: Second year TMU student pursuing a BSc in Biomedical Sciences
o **Industry**: Healthcare

Goals and Values	Challenges and Pain Points
1. Wants to maintain balance with his part-time work, university studies, and social life. 2. Wants to complete his degree with a high GPA to pursue a masters and medical school after graduation. 3. Wants to have enough money to fund his future education without relying too much on parental funding or government loans. 4. Wants to spend time and have fun with friends and family. 5. Working towards pursuing a career in anesthesiology.	1. Stressed with his finances and future expenses for his education. 2. Struggles with occasional bad financial decisions like overspending on Uber/Lyft, eating out, video games, and collectables. 3. Has a busy schedule as a result of part-time shifts and university studies. 4. Very little knowledge of financial literacy.

Sources of Information	Objections and Purchasing Power

1. Google
2. Major social media platforms:
  a. Youtube
  b. Frequently on TikTok and Instagram
  c. Sometimes on Reddit for advice
3. Friends and family
4. ChatGPT
	1. May be worried about the amount of time required to invest in learning how to use the app.
	2. Doubtful in the overall effectiveness of the app.
	3. Bad spending habits may take time to overcome.
	
	4. Very little disposable income due to his low number of shifts and minimum wage pay.
	5. MoneyMentor will be a free app, which may influence him to try it out.

4. **Data Collection**:
   o All of the data collected to create the user profile came from studies and surveys we found online.
      ▪ **Income**: We used the average salary of a Starbucks Barista to calculate Ethan's monthly salary (Talent.com, n.d.). These types of part-time jobs within the fast food industry are common among university students.
      ▪ **Goal #1**: A significant number of students currently work part-time to earn money while they are in university. In Toronto, 46% of students work part time (Statistics Canada, 2024).
      ▪ **Goal #2**: It is common for students with degrees related to Ethan's program in Biomedical Sciences to pursue higher level education after graduation to be able to work in specific jobs in healthcare (University of Waterloo, 2023).
      ▪ **Challenges/Pain Points #1**: Ethan requires a significant amount of funding/financial support alongside his personal finances to be able to afford medical school in Canada. For example, at the University of Toronto, the year one fees are a total of about $25,000 (University of Toronto, 2024).
      ▪ **Sources of Information**: We found the most used sources of information by Gen Z and incorporated them into Ethan's persona (Davies and Kasia, 2025).

Problem Definition

1. **Identified Problems**:
   o **Impulsive Spending and Overspending**: 41% of Generation Z consumers are impulse purchasers, which means that many users find it difficult to stick to a budget (Djafarova and Bowes, 2021).
   o **Lack of Budgeting Education**: Studies indicated that "over one-quarter of Gen Z lacks confidence in their financial understanding" (Wildfong, 2024). Due to this, many students and young adults end up spending excessively and develop debt.
   o **Financial Stress & Anxiety**: With research indicating that only 31% of young adults feel financially secure, it is clear that a significant amount of students' mental health, academic performance, and general well-being are all negatively impacted by challenges with money (Hemmerdinger, 2023).
   o **Difficulty in Tracking Expenses**: Considering how the average screen time of young adults is more than 7 hours a day, having an app to track

expenses will make it easy for users to adopt and incorporate within their daily usage (The Star, 2024).

2. **Existing Solutions**:
    o **Manual Expense Tracking (Excel/Sheets)**:
        ▪ Incredibly tedious.
        ▪ Time-consuming.
        ▪ Every transaction has to be manually logged into the spreadsheet.
        ▪ May be difficult to learn specific functions within Excel/Sheets.
    o **General AI Chats (e.g. ChatGPT)**:
        ▪ Can not provide in depth personal advice based on a user's data.
        ▪ Only provides basic information.
    o **Other Budgeting Apps**:
        ▪ They usually have expensive subscription services.
        ▪ Lacking personalized AI insights.
        ▪ May have over complicated features.
    o **Transaction Tracking with Bank Apps**:
        ▪ Lacking personalized insights.
        ▪ Only shows transactions.
        ▪ Very basic features available.
        ▪ Limited to specific financial institutions and their ecosystem.
        ▪ App features vary depending on the bank.
    o **Financial Advisors/Service providers**:
        ▪ Costs money and can be expensive.
        ▪ Time-consuming for people with busy schedules.
        ▪ Unreasonable for students and young adults with limited budgets.

3. **User Stories**:
    1. *"As a student living on a tight budget, I want AI to help me predict upcoming expenses so that I can plan my finances accordingly."*
    2. *"As a university student, I want my spending habits analyzed so that I can identify areas where I can cut costs and save more."*
    3. *"As a part-time worker, I want an AI financial guide so that I can learn about budgeting and saving without prior financial knowledge."*

4. **Problem Statement**:
    o Lack of financial literacy, issues with keeping track of spending, and bad saving habits are the main causes of money management problems among students and young adults. By using various financial features alongside AI to evaluate user spending trends, personalized recommendations, and easy-to-use financial tracking, MoneyMentor works to make budgeting simpler and allows users to make good financial decisions with ease.

Requirements

1. **Target Platform**:
   - MoneyMentor will be a web application built using Python and will be accessible on all platforms using an internet browser.
2. **Core Features**:
   1. Users will be able to create accounts and have their data be saved onto a secure database.
   2. Alongside manually logging transactions, also allow users to upload screenshots of their transactions or PDFs of bank statements.
   3. Automatically log and categorize their transactions using OCR-based text extraction.
   4. A user financial dashboard where users can see their finances over time and their spending breakdowns, progress on savings, and personal trends.
   5. Have different graphs and charts to visualize user finances.
   6. Have a way to set monthly budgets that can be dynamically adjusted based on user spending trends.
   7. Provide personalized, real-time AI feedback and recommendations using an API.
   8. Use AI to analyze spending patterns and provide insights to the user.
   9. Use historical transaction data from the user to predict future expenses and recommend budget adjustments.
   10. Have an AI chatbot that uses user financial user data as context to answer financial questions.
3. **Additional Notes**:
   - The development should prioritize core functionality like expense tracking, OCR processing, and manual categorization of transactions before implementing advanced features related to AI.
   - We should ensure that the app has a simple and intuitive UI and UX to make it easier for students to understand and adopt.
   - Using APIs for AI will allow for easy AI integration, but may need to be slightly customized for the specific needs of MoneyMentor.
   - When adding more advanced features, we should begin with simplified versions and then enhance them over time depending on remaining development time.

References

Canadian Credit Union Association Cooperative. "New Poll Highlights Financial Struggles of Millennials and Gen Z Compared to Older Generations ." *Cision Canada*, Cision Canada, 23 Apr. 2024, www.newswire.ca/news-releases/new-poll-highlights-financial-struggles-of-millennials-and-gen-z-compared-to-older-generations-871651729.html.

Davies, Kasia. " Leading Sources of Information among Generation Z Consumers Researching Products They Intend to Buy Worldwide in 2023." *Statista*, Statista, 14 Jan. 2025, www.statista.com/statistics/1341355/sources-of-info-for-product-research-among-gen-z.

Djafarova, Elmira, and Tamar Bowes. "'Instagram Made Me Buy It': Generation Z Impulse Purchases in Fashion Industry." *ScienceDirect*, Journal of Retailing and Consumer Services, 21 Mar. 2021, www.sciencedirect.com/science/article/abs/pii/S0969698920313539.

Hemmerdinger, Jennifer. "Financial Worry Is a Top Driver of Anxiety among Gen Z, New EY Study Finds." *EY*, EY, 18 Sept. 2023, www.ey.com/en_us/newsroom/2023/09/financial-worry-is-a-top-driver-of-anxiety-among-gen-z-new-ey-study-finds.

The Star. "Gen Zers Spend More than Seven Hours a Day on Their Phones." *The Star*, 23 Jan. 2024, www.thestar.com.my/tech/tech-news/2024/01/23/gen-zers-spend-more-than-seven-hours-a-day-on-their-phones.

Moore, Andrea et al. "A qualitative examination of the impacts of financial stress on college students' well-being: Insights from a large, private institution." *SAGE open medicine* vol. 9 20503121211018122. 22 May. 2021, doi:10.1177/20503121211018122

"Starbucks Barista Average Salary in Canada, 2025." *Talent.Com*, Talent.com, ca.talent.com/salary?job=starbucks+barista.

Statistics Canada. *Proportion of Students Who Are Working, Aged 15 to 29, by Age and Type of Institution Attended*, Government of Canada, 22 Oct. 2024, www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3710010401.

University of Waterloo. "Graduation Statistics - Health Sciences 2023: Health: University of Waterloo." *Health | University of Waterloo*, 22 Nov. 2024, uwaterloo.ca/health/graduation-statistics-health-sciences-2023.

Wildfong, Anne. "Future-Proof Your Family – Engaging Gen Y and Z in Financial Literacy." CWB Financial Group, CWB Wealth, 20 Nov. 2024, www.cwbwealth.com/en/news-and-stories/insights/future-proof-your-family-engaging-gen-y-and-z-in-financial-literacy.

GitHub Link:

https://github.com/anthonytoyco/moneymentor