**Internship Project Details:** Savings Plan Generator

**Project Title:**
"AI-Powered Savings Plan Generator with Generative AI Integration"

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**Project Objective:**
To develop an intelligent savings plan application using generative AI models, capable of creating personalized monthly savings plans based on user inputs, while leveraging advanced natural language processing (NLP) capabilities.

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**Project Description:**
Context: Managing personal finances and savings can be challenging for users with varying income levels, expenses, and goals. The goal of this project is to create a robust AI-powered solution that generates detailed and actionable savings plans based on user inputs such as income, fixed and variable expenses, financial goals, and timelines. The project aims to enhance user experience by integrating generative AI for savings plan generation and ensuring a scalable and efficient design.

**Key Features:**

- Personalized monthly savings plans based on user preferences and financial data.
- Suggestions for adjustments in budget categories to meet financial goals.
- Real-time, interactive user interface for dynamic input and output adjustments.

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**Project Tasks:**

1. **Data Input and User Interaction:**
    - Create an intuitive UI using Streamlit for users to input financial details:
        - Income: Monthly income of the user.
        - Fixed Expenses: Recurring mandatory expenses such as rent and bills.
        - Variable Expenses: Discretionary expenses such as dining out or shopping.
        - Savings Goal: Target amount the user wants to save.
        - Duration: Time period (in months) to achieve the savings goal.

2. **Generative AI Integration:**
    - Use generative AI models to create personalized savings plans based on user inputs.
    - Dynamically develop prompts using input parameters to ensure accurate and actionable outputs.

3. **Savings Plan Evaluation and Display:**
    - Validate AI-generated outputs for:
        - Feasibility of the savings plan.
        - Recommendations for reducing variable expenses if needed.
        - Alignment with user-defined goals and timelines.
    - Display results in a structured format using Streamlit, including:
        - Monthly savings breakdown.
        - Budget adjustments and optimization tips.

4. **Deployment and Scalability:**
    - Optimize the Streamlit app for smooth performance and responsiveness.
    - Deploy the application on a cloud platform (e.g., AWS, Heroku, or Streamlit Community Cloud) for public access.

5. **Documentation and Presentation:**
    - Document the workflow, including:
        - Input-output mapping for generative AI models.
        - Key challenges and their solutions (e.g., vague or unrealistic user inputs).
    - Present findings and results in a comprehensive report.

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**Technologies to Use:**

**Programming Language:**
- Python

**Tools and Libraries:**
- Streamlit: For the web application interface.
- Google Generative AI API (Gemini-Pro): To generate savings plans.

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**Expected Deliverables:**

1. **Codebase:**
    - A well-structured repository containing the application code.

2. **Streamlit Application:**
    - A user-friendly interface deployed on the web for public access.

3. **Documentation:**
    - Detailed input-output mapping for AI model integration.
    - Challenges encountered and solutions implemented.
    - Insights and recommendations for improving AI-generated savings plans.

4. **AI Integration Logs:**
    - Prompts used and responses generated by the AI.
    - Evaluation of AI performance in generating actionable savings plans.

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**Learning Outcomes:**

- Gain an understanding of integrating generative AI into financial planning applications.
- Learn to dynamically handle user inputs for personalized outputs.
- Acquire experience in deploying web applications with Streamlit.
- Enhance problem-solving skills in generating and evaluating actionable financial outputs.