Internship Project Details: Carrer Path Planner

Project Title:
"AI-Powered Career Path Planner with Generative AI Integration"

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

Project Description:
Context:
Career planning can be overwhelming for individuals looking to achieve specific professional goals. The goal of this project is to create a robust AI-powered solution that generates detailed and actionable career roadmaps based on user inputs such as current role, skills, desired career goal, and timeline. The project focuses on enhancing user experience by integrating generative AI for roadmap generation and ensuring scalability and efficiency in its design.

Key Features:
- Personalized career roadmaps based on user inputs and aspirations.
- Suggestions for key skills, certifications, and milestones required to achieve career goals.
- Real-time, interactive user interface for dynamic input and output adjustments.

Project Tasks:
1. **Data Input and User Interaction:**
   - Create an intuitive UI using Streamlit for users to input career-related details:
     - Current Role: The user's current job position.
     - Skills: Current skillset (e.g., programming languages, tools, or domain knowledge).
     - Career Goal: The desired future role or position.
     - Duration: Timeline (in months) to achieve the career goal.

2. **Generative AI Integration:**
   - Use generative AI models to create personalized career roadmaps based on user inputs.
   - Dynamically develop prompts using input parameters to ensure accurate and actionable outputs.
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3. **Career Roadmap Evaluation and Display:**

- Validate AI-generated outputs for:
  - Feasibility of the roadmap.
  - Relevance of suggested skills, certifications, and milestones.
  - Alignment with user-defined goals and timeline.

- **Display results in a structured format using Streamlit, including:**
  - Key steps to achieve the desired career goal.
  - Suggestions for relevant certifications, projects, and networking strategies.

4. **Deployment and Scalability:**
   - Optimize the Streamlit app for smooth performance and user engagement.
   - 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 conflicting user inputs).
   - Present findings and results in a comprehensive report.

Technologies to Use:
Programming Language:
- Python

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

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 career roadmaps.

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

Learning Outcomes:
- Gain an understanding of integrating generative AI into career 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 personalized career roadmaps.