CloudKarya

RecAgent

Automating the Recruiting Process From Job Description to Offer Letters

- The project focuses on automating the recruitment process by using an interview agent powered by GPT-4 to conduct dynamic interviews and a scoring agent utilizing the Llama3 70B LLM model to evaluate and score candidates based on their transcribed interview responses.

01 What problem is being Solved

The problem of inefficient and time-consuming traditional recruitment processes is being solved.

02 Who has the problem

Organizations and companies with high-volume hiring needs face this problem.

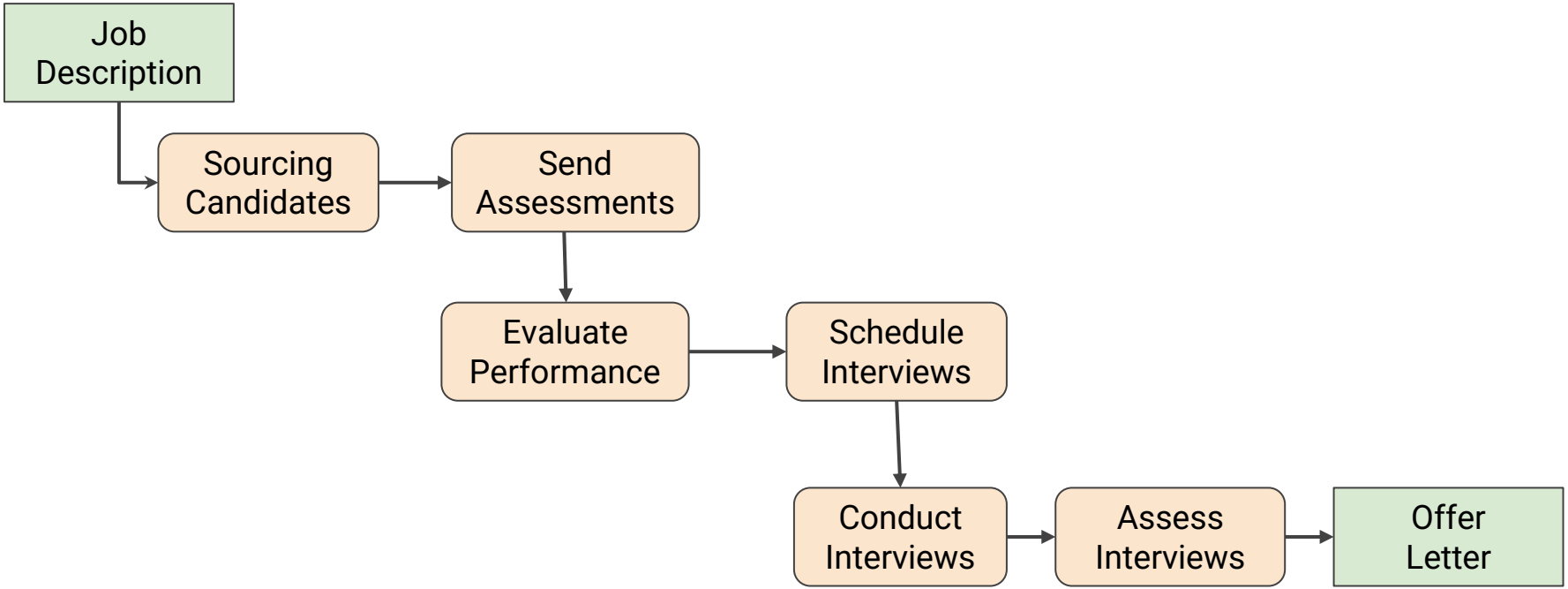
03 How is it being solved

The problem will be solved through the automation of the entire recruitment process using AI-driven agents.

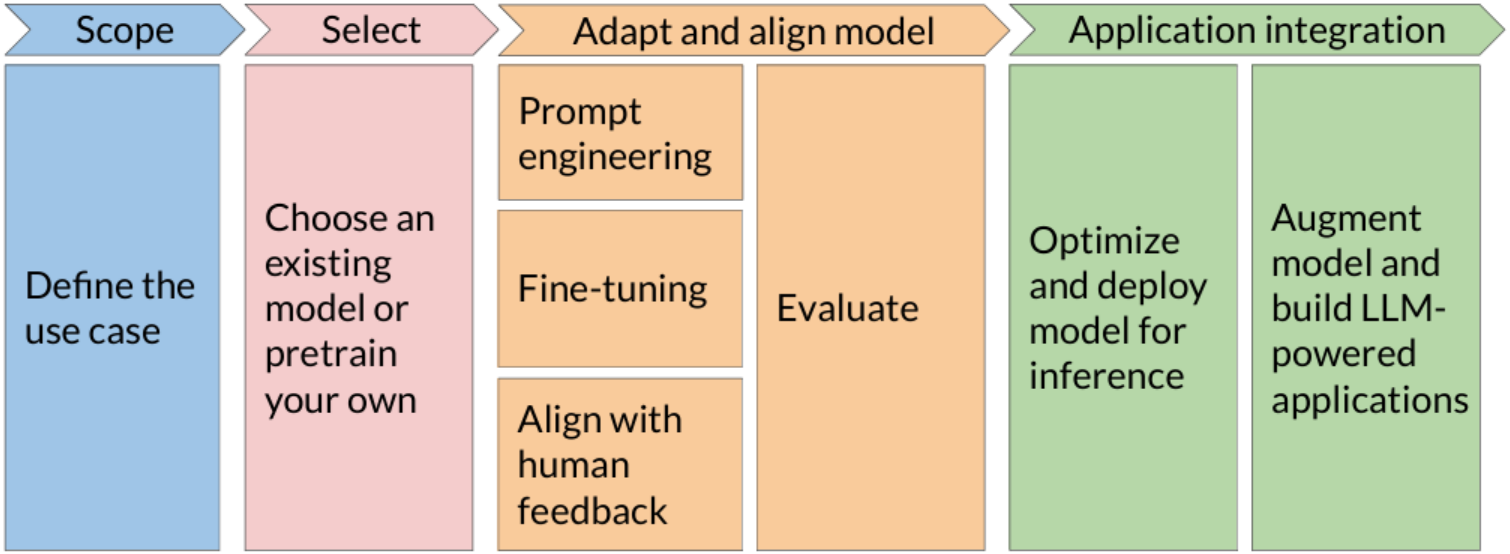
04 Who will be paying the solution

Companies and Organizations adopting the AI-driven recruitment technology.

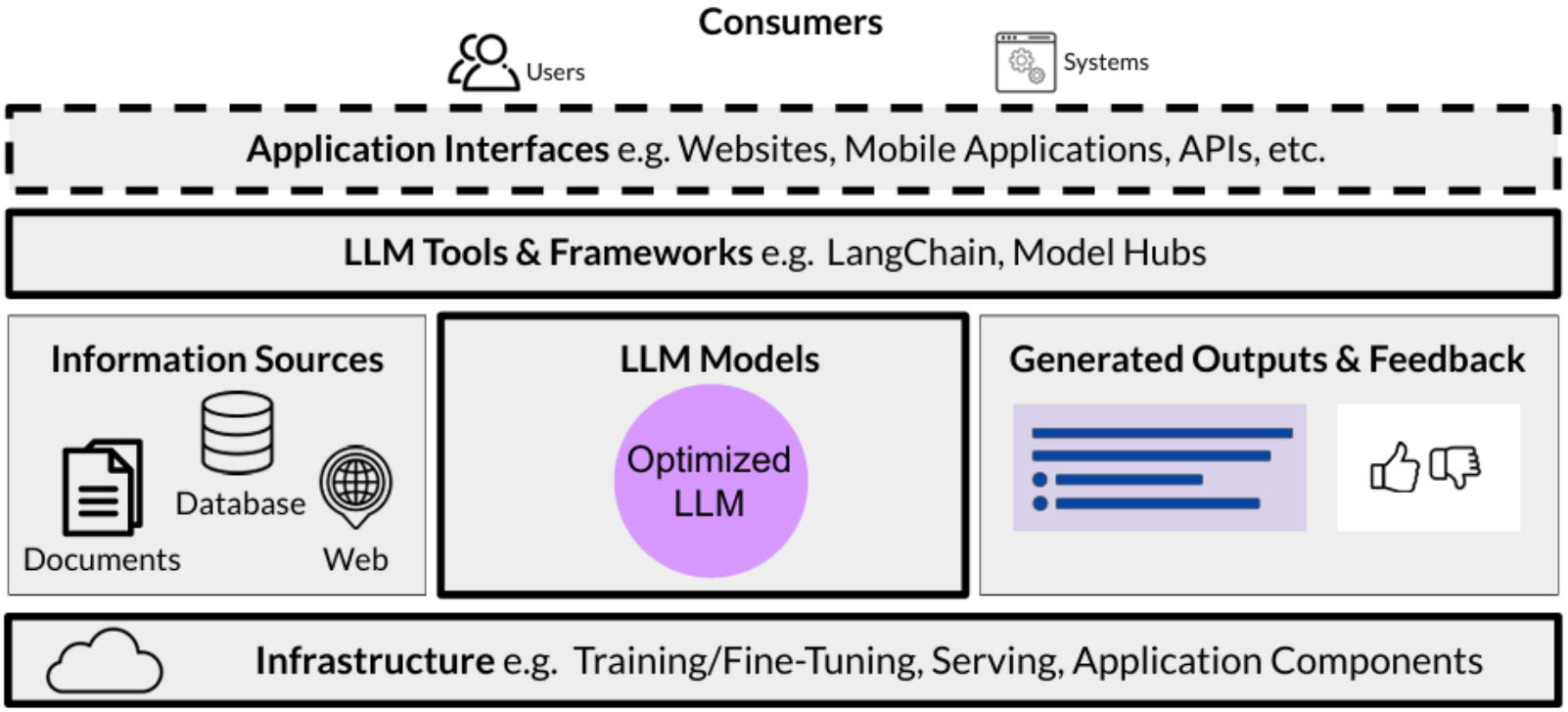
Architecture



Generative AI Project Lifecycle



Building Generative AI Applications



The Demo

- Meet Mary, HR Manager @ Acme Industries
- She wants a Python Programmer for a Data Science team
- VP of Engineering has shared the job description, and she is tasked with finding a good candidate and make an offer within 5 days
- She had heard about RecAgent from CloudKarya, so she signs up for an account, and starts the process.

CloudKarya

Streamlined Hiring Process

Step 1 - Upload Job Description

Step 2 - Source Candidates

i. Based on Job Description search LinkedIn for candidates
ii. Review the profile and match with job's requirements
iii. Send email to shortlisted candidates, finding if they are interested in this position

Step 3 - Send Assessment Test

i. For candidates who have expressed interest in the job, send a test.
ii. This test is generated by RecAgent based on the job description.
iii. RecAgent evaluate the performance of candidates and perform initial screening

Step 4 - Schedule Interviews

i. RecAgent will create a schedule for interviews of the selected candidates.
ii. An Email with the interview meet link is sent to the candidates
iii. This process is only complete when the candidate has accepted the invitation

Conduct Interviews

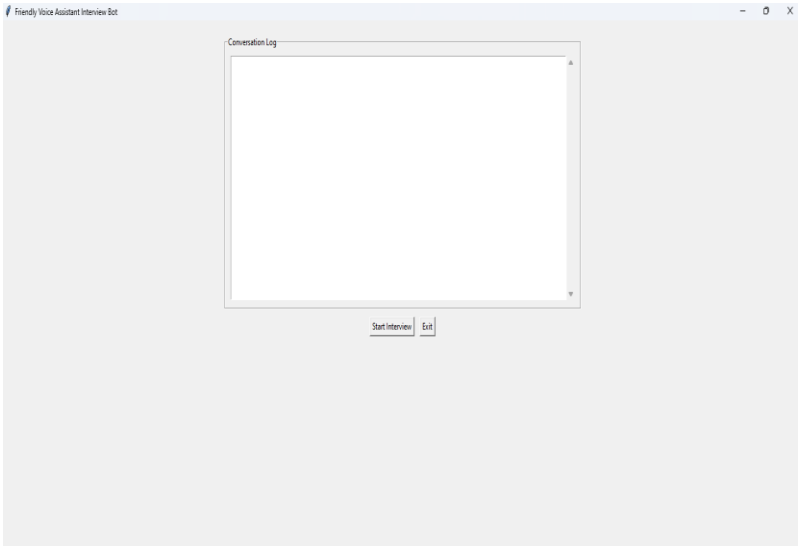
Interview Agent:-

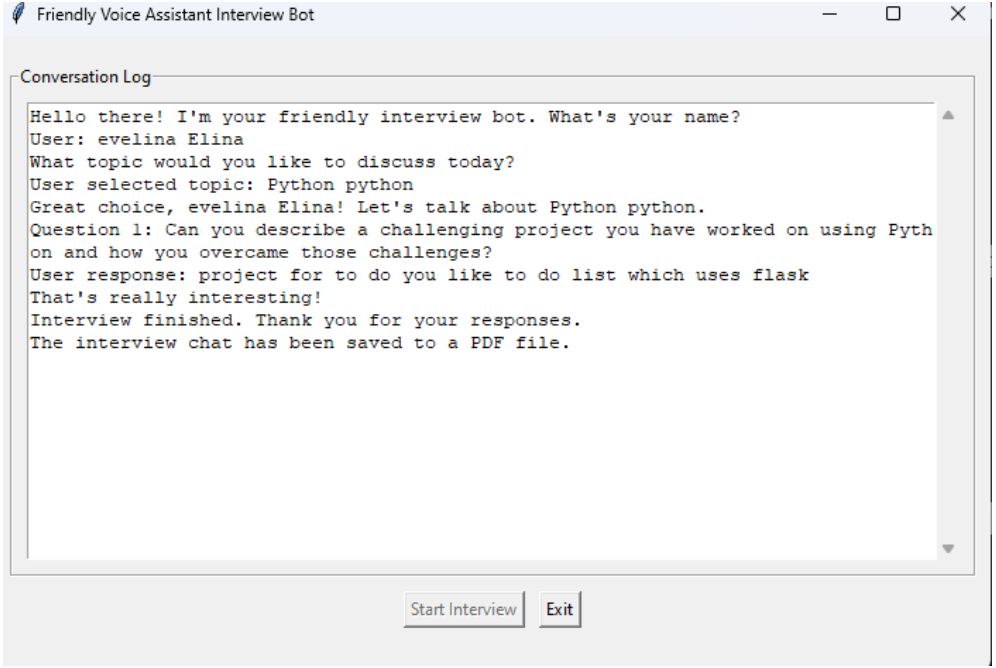
- **Role**: The interview agent uses generative AI to conduct dynamic, contextually aware interview interactions.
- **Technology**: Open AI's GPT-4 model.
- **Functionality**:

1. **Voice Input Processing**: The interview agent receives voice input from the candidate.
2. **Intelligent Response Generation**: Using GPT-4, the agent generates responses that are contextually appropriate and relevant to the questions asked and the candidate's answers.
3. **Voice Output**: The agent converts the generated text responses back to voice output, creating a seamless conversational experience it also records the answers of the interviewee and generates pdf which contains both questions and answers .

Result

Interview Agent:-





Application Assessment

Scoring Agent

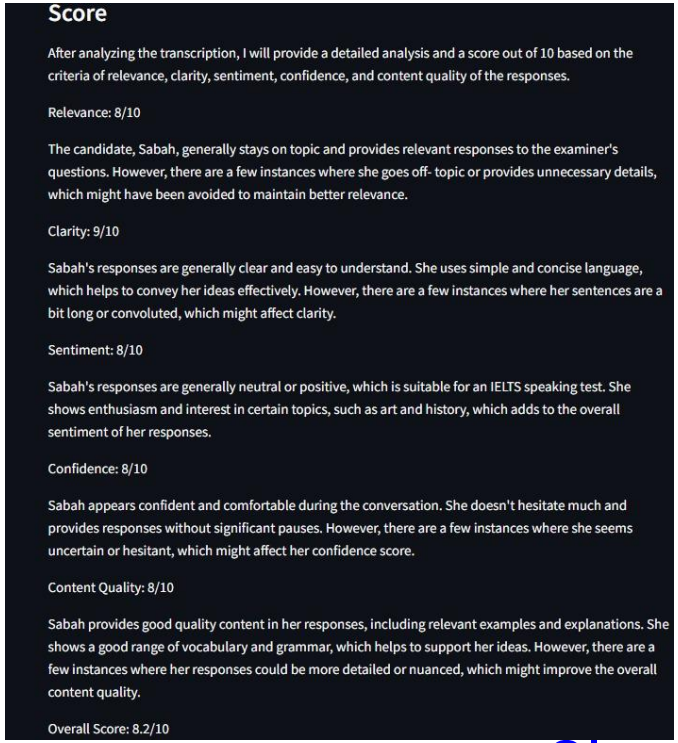
- **Role**: The scoring agent uses generative AI to assess candidate interviews and generate comprehensive scores.
- **Technology**: Llama3 70B LLM model.
- **Functionality**:

a. **Transcription Analysis**: After the interview audio is transcribed to text using Assembly AI and ffm peg, the scoring agent analyzes the transcribed text.

b. **Text Generation and Scoring**: The Llama3 model generates insights and scores based on the interview content, evaluating factors such as relevance, depth of knowledge, communication skills, and overall suitability for the role.

Results

Scoring Agent



Generative AI Concepts used

Interview Agent:

- **Open AI's GPT-4 Model**: Uses advanced natural language processing to understand and generate human-like responses.
- **Dynamic Interaction**: Conducts interviews by generating contextually relevant questions and responses based on candidate inputs.
- **Voice Processing**: Converts voice inputs to text for analysis and text responses back to voice, enabling seamless conversation.

Scoring Agent:

- **Llama3 70B LLM Model**: Analyzes and interprets large volumes of text data to generate insights.
- **Interview Transcription Analysis**: Evaluates transcribed text from interviews to assess candidate performance.
- **Objective Scoring**: Generates comprehensive scores based on predefined criteria, ensuring unbiased evaluation.

Technologies Used

- Git
- Gitpod
- Fast API
- Streamlit
- Assembly ai
- Llama 3
- Tkinter
- GPT-4

Advantages

Interview Agent:

- **Efficiency**: Automates the interview process, saving time for recruiters.
- **Consistency**: Provides uniform interview experiences, reducing interviewer bias.
- **Dynamic Interaction**: Adapts to candidate responses, creating a natural and engaging conversation.
- **Scalability**: Can handle multiple interviews simultaneously, allowing for efficient high-volume recruitment.
- **Cost-Effective**: Reduces the need for extensive human resources during initial interview stages.

Advantages

Scoring Agent:

- **Objectivity**: Provides unbiased evaluations by using predefined criteria and algorithms.
- **Comprehensive Analysis**: Evaluates the entirety of the interview content, ensuring thorough assessments.
- **Accuracy**: Uses advanced language models to accurately interpret and score candidate responses.
- **Speed**: Quickly processes and analyzes transcriptions, accelerating the candidate evaluation process.
- **Data-Driven Decisions**: Generates scores based on detailed analysis, supporting informed hiring decisions.

Conclusion

The "**Automated Recruitment Process Using Open Source LLM Agents**" project represents a significant advancement in recruitment technology by integrating sophisticated generative AI models into the hiring workflow. By employing the interview agent powered by Open AI's GPT-4 and the scoring agent utilizing the Llama3 70B LLM model, the project effectively automates and optimizes key recruitment stages.

Key Outcomes:

•**Enhanced Efficiency**: Automates repetitive tasks, streamlining the recruitment process and reducing time-to-hire.

•**Improved Accuracy**: Provides objective and consistent candidate evaluations through advanced AI analysis.

•**Engaging Experience**: Creates dynamic, conversational interviews that enhance candidate experience and engagement.

•**Scalability**: Handles large volumes of applications and interviews with ease, supporting high-growth organizations.

Thank you !