ELEVATEX

Elevating employees through personalized AI-driven upskilling plans

PRESENTED BY

Ashawes team

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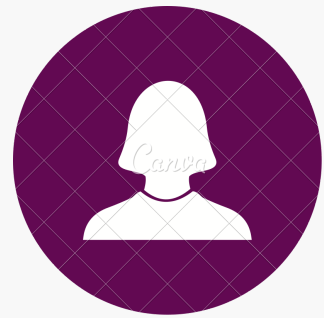
Team members

AHD ALSOBHI

Data science student, digital media data analyst, and programmer

AMJAD ALMEHMADI

Computer science fresh graduate, system analyst, programmer.

ENAS KHAN

Senior Data Scientist is skilled in analyzing data and passionate about AI.

AMJAAD HASAN

Data science student, business analyst.

ZAIN ABDALWAHAB

Data Science fresh graduate, Data Anayst.

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Introduction

- In today's rapidly evolving business landscape, organizations strive to optimize their workforce's potential and maintain a competitive edge. Recognizing the importance of employee development and upskilling, this project aims to leverage the power of Artificial Intelligence (AI) to create personalized upskilling plans based on employee performance and current skill levels.

- This data-driven approach enables the identification of patterns, strengths, and areas for improvement, laying the foundation for a robust employee development framework.

Problem

- Employees with years of experience are often assigned to projects that require specialized skills and knowledge. However, employees may not have the time or resources to pursue the necessary training on their own.

- Assigning courses to employees and tracking their progress manually can be time-consuming and resource-intensive for managers.

Sulotion

- To address the challenge, we explored creating a personalized learning App powered by AI. This app would provide tailored recommendations and guidance to employees, helping them improve skills and advance in their careers.

Project features

- **Scalable Solution:** The Application's AI-driven approach enables it to cater to a wide range of job roles and experience levels, making it a versatile tool for organizations of all sizes.

- **Customized Recommendations:** The App offers personalized learning pathways, suggesting specific courses, certifications, and training programs tailored to each employee's years of experience.

- **Time and Cost Efficiency:** By streamlining the learning process, employees can efficiently acquire new skills, resulting in improved productivity and cost-effective skill development.

- **Continuous Improvement:** The Application's recommendations are dynamic and evolve based on the latest industry trends, ensuring employees stay up-to-date with the most relevant learning resources.

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Bussines plan
Market size

- The growth rate of the global market for this system that provides recommendations for employee efficiency is expected to be around 20% per year in the next 5 years. This means that the global market size for this system could reach $468 billion by 2028.

- The growth rate of the Saudi Arabian market for this system that provides recommendations for employee efficiency is expected to be around 25% per year in the next 5 years. This means that the Saudi Arabia market size for this system could reach $2.29 billion by 2028.

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$234 BILLION

$917 MILLION

$91.7 MILLION
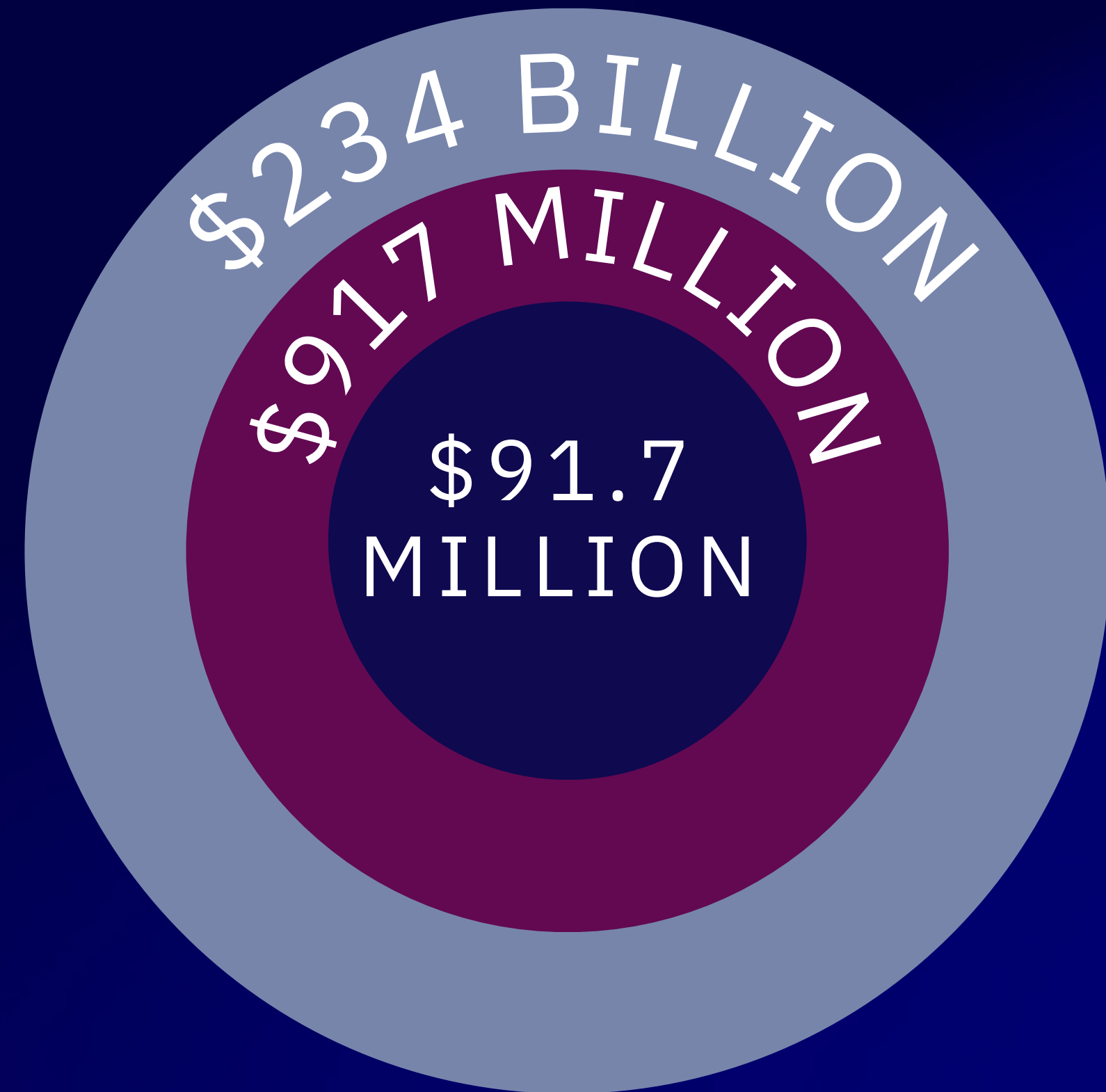
Bussines plan

Revenue streams

SUBSCRIPTION FEES

- Charging a monthly or annual subscription fee to companies and organizations that wish to obtain our services.

COMMISSION ON COURSE AND CAMP ENROLLMENTS

- The System can also earn a commission on any courses or camps that employees enroll in through its recommendations.

ADVERTISING

- The system can sell advertising space on its website and in its mobile application to companies that want to reach companies interested in increasing their productivity and improving the output of their employees.

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Added Value

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In the future, our program could be used to:

- Create individualized learning paths based on the analyzed data of the registered employees in Saudi Arabia.

- Provide real-time feedback and support by tracking their progress, and helping them to stay on track in career growth aspect.

- Support businesses with insights that empower them to develop a training program for the workforce to meet their business needs. And be a part of the contribution to the economic growth of Saudi Arabia

We are excited to continue developing our program and to work with the Hadaf Human Resources Development Fund to make it a reality for all employees in Saudi Arabia.

Codes

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```python
from flask import Flask, render_template, request
import pandas as pd
import openai

app = Flask(__name__)
app.config['SECRET_KEY'] = 'sk-njVxLlQaYYV6czy8mAvMT3B1bkFJTq3I29TV6r8l7JX5XJHr'

# Setup your OpenAI API credentials
openai.api_key = 'sk-njVxLlQaYYV6czy8mAvMT3B1bkFJTq3I29TV6r8l7JX5XJHr'

# Load the data from the Excel sheet
data = pd.read_excel("D:\Test\Data\data.xlsx")

# Define a function to recommend certificates based on job role and years of experience
def recommend_certificates(role, experience, available_certificates):
    filtered_data = data[(data['job_title'] == role) & (data['experience_years'] <= experience)]
    recommended_certificates = filtered_data['courses_or_certificates'].tolist()
    filtered_certificates = [cert for cert in recommended_certificates if cert in available_certificates]
    return filtered_certificates

# Define a function to generate chatbot response using ChatGPT
# Generate a chatbot response using ChatGPT
def generate_chatbot_response(prompt):
    response = openai.ChatCompletion.create(
        model="gpt-3.5-turbo",
        messages=[
            {"role": "system", "content": "You are a helpful assistant."},
            {"role": "user", "content": prompt}
        ]
    )
    return response.choices[0].message.content

@app.route('/')
def index():
    return render_template('index.html')

@app.route('/get_recommendation', methods=['POST'])
def get_recommendation():
    experience = int(request.form['experience'])
    job_role = request.form['job_role']
    certificates_available = request.form.getlist('certificates_available')

    # Filter the recommended certificates based on job role, experience, and available certificates
    recommended_certificates = recommend_certificates(job_role, experience, certificates_available)

    # Generate a chatbot response using ChatGPT
    chatbot_message = f"I recommend the following certificates for a {job_role} with {experience} years of experience:\n"
    if recommended_certificates:
        for i, cert in enumerate(recommended_certificates):
            chatbot_message += f"{i+1}. {cert}\n"
        chatbot_message += "You can start by acquiring these certificates to enhance your career path."
    else:
        chatbot_message += "Unfortunately, no recommended certificates are available or match your criteria."

    chatbot_response = generate_chatbot_response(chatbot_message)

    return render_template('index.html', recommendation=chatbot_response)

if __name__ == "__main__":
    app.run(debug=True)
```

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Personalized Learning Chatbot</title>
</head>
<body>
    <h1>Personalized Learning Chatbot</h1>
    <form action="/get_recommendation" method="post">
        Experience Level:
        <input type="text" name="experience"><br><br>
        Job Role:
        <input type="text" name="job_role"><br><br>
        <input type="submit" value="Get Recommendation">
    </form>
    {% if recommendation %}
        <h2>Recommendation:</h2>
        <p>{{ recommendation }}</p>
    {% endif %}
</body>
</html>
```

Process of building

1. **Setup**
Set up the development environment and Install the necessary libraries (Flask for the web app).

2. **Collecting Data**
Prepare and organize our employee data.

3. **Training**
Use OpenAI's API to train the App on the collected data.

4. **Creating the UI**
Design a simple web interface for the App.

5. **Integrate App and UI**
Connect the UI with the App backend.

6. **Recommendation Engine**
Based on employee experience and job role, generate personalized learning plans.

7. **Testing**
Thoroughly test the chatbot to ensure it's working as expected.

Personalized Learning Chatbot

Experience Level: [   ]

Job Role: [   ]

[Get Recommendation]

Thank You