HR-Tech Innovation Challenge: AI-Powered Resume Screening & Employee Engagement Analysis

Problem Statement

In this assignment let's aims to automate two critical HR processes:

1. **Resume Screening:** Develop an AI tool to filter resumes for a "Software Engineer" role by matching skills, experience, and qualifications from job descriptions.
2. **Employee Sentiment Analysis:** Analyze employee feedback (e.g., surveys, exit interviews) to predict attrition risks and recommend engagement strategies.

Your Task:

1. Use **Azure AI Studio** or **Google AI Studio** to build and deploy models for the above tasks.
2. Apply **prompt engineering** to optimize outputs from large language models (LLMs) for accuracy and relevance.
3. Propose a detailed technical approach, including data pipelines, model selection, and integration strategies.

Deliverables

1. **Technical Report (PDF):**
    - Problem understanding and proposed solution.
    - Workflow diagram of your AI pipeline.
    - Details of prompts designed for LLMs (e.g., GPT-4) to extract resume keywords or analyze sentiment.
    - Screenshots of your Azure/Google AI Studio workspace (model training, deployment).
    - Challenges faced and how you resolved them.
2. **Code & Deployment (Bonus):**
    - Clean, documented code for data preprocessing, model training, and inference.
    - Deploy at least one model as an API endpoint using Azure/Google AI Studio.
3. **Presentation (5-7 slides):**
    - Summarize your solution, results, and business impact.

Submission Guidelines

1. Submit a ZIP file containing:
2. Technical report (PDF).
3. Code files (Jupyter Notebooks, Python scripts).
4. Presentation (PDF/PPT).
5. API endpoint link (if deployed).
6. Deadline: **7 days** from assignment receipt.

Note: Plagiarism or use of pre-built solutions (e.g., Copying GitHub repos) will result in disqualification.