**Description:**

Our solution is designed to simulate the DRDO interview process in an unbiased manner. To begin, the user is required to upload their resume. Once uploaded, our model extracts the skills and experience from the resume, allowing us to separate freshers and experts and set a difficulty level based on their skill level. This enables us to evaluate candidates accordingly.  
After extracting skills and experience from the resume, the candidate will be asked initial ice-breaking questions. These questions are designed to test their soft skills as well as their favourite subjects, providing a real-time experience similar to an actual DRDO interview. For experts, we will ask about their familiarity with a particular skill or domain, as they typically have in-depth knowledge in a specific area.

Once everything is ready, we will move on to the actual interview process. During the interview, the candidate will be asked questions from the extracted skills and also from the skills mentioned in the job description provided by the admin. After the candidate answers a question, their response will be evaluated, and follow-up questions will be generated based on their previous response. The domain will also switch after certain constraints are reached.  
After completing the interview, a report will be generated along with feedback.  
Our solution is divided into five phases:  
Resume Analyzer  
Question Generation  
Evaluation Phase  
Follow-up Questions  
Data Warehouse  
Lets deeply dive into our solution,

Resume Analyzer:  
 Once a candidate uploads their resume, the text contents will be separated, and the skills and experience will be extracted using GROQ. After the skillset is extracted from the resume, we will begin with ice-breaking questions, such as "Tell me your favorite subjects and why are you interested in them?"  
  
  
Question Generation:  
 Idea:- Following the ice-breaking question, we will start generating questions based on the domains extracted from the resume and experience. To achieve this, we will scrape data from web resources, preprocess it, and use a classifier model to classify the data into easy, medium, and hard levels. The classified data will be stored in a data warehouse. When questions need to be generated, we will fetch the relevant context from the data warehouse (based on the candidate's skill level) and generate questions from that context.  
  
Evaluation Phase:  
Idea: In the first step of the evaluation model, the question is categorized into one of two types: fact or explanation. For fact-based questions, user responses generally remain consistent, allowing us to use keyword matching for evaluation. However, for explanation-based questions, each user may provide different but correct explanations. In these cases, we evaluate based on semantics (using SciBERT for semantic matching) and apply cosine similarity for keyword-based matching. Additionally, we handle negation cases, such as "React is a library" versus "React is not a library," where both statements are completely different but might otherwise receive similar scores. When the candidate's answer does not match the answer stored in the data warehouse, the correct answer will be scraped from the internet. After evaluating the scraped data, it will be added to the data warehouse for future use.  
  
Follow-up Question:  
Idea: Once the candidate's answer is evaluated and meets a threshold score, a follow-up question is presented. The follow-up question will be of higher difficulty, and the evaluation marks allocated will increase accordingly, reflecting the elevated difficulty level.  
  
 Data Warehouse:  
Idea: The data warehouse acts as a resource for generating questions and for continuously improving our system. Each time a candidate provides a wrong answer, the scraped data is added to the data warehouse. Similarly, if the candidate's answer is correct, it is also stored in the data warehouse. This allows the system to grow stronger and more accurate after each interview.