

1 Title

AI-Powered Interview Intelligence Agent for Real-Time Hiring Validation

2 Background / Context

Technical, behavioral, and leadership interviews are critical decision-making moments in hiring. However, interview quality often varies due to:

- Inconsistent questioning across candidates
- Missed opportunities for deep follow-up questions
- Cognitive overload for interviewers (listening, evaluating, taking notes simultaneously)
- Lack of structured validation against the candidate's resume
- Difficulty detecting inconsistencies in real time

Today's virtual interviews frequently take place on platforms such as:

- Zoom
- Google Meet
- Cisco Webex

While these platforms enable remote collaboration, they do not provide intelligent assistance to:

- Dynamically suggest deeper follow-up questions
- Detect contradictions between spoken answers and resume claims
- Guide interviewers toward competency-based evaluation
- Flag potential exaggeration or resume inflation

Recruiters and hiring managers need an AI-powered interview copilot that can:

- Listen in real time
- Understand context
- Cross-check with resume data
- Prompt intelligent follow-up questions
- Flag inconsistencies instantly

This creates an opportunity to build an AI agent that augments interviewers without disrupting the natural flow of conversation.

3 Problem to Solve

Participants need to:

Build or design an AI-powered real-time interview assistant
That listens to live virtual interviews and intelligently supports interviewers
By solving the lack of structured, context-aware, and compliance-driven interview guidance.

The system should be able to:

- Join or integrate with virtual interview platforms
- Transcribe conversations in real time
- Understand candidate responses using NLP/LLMs
- Cross-reference spoken responses with uploaded resume data
- Detect contradictions or inconsistencies with resume claims
- Flag resume-to-response mismatches in real time
- Suggest dynamic follow-up questions based on candidate answers
- Generate competency-based probing questions
- Identify vague, generic, or incomplete answers
- Provide structured evaluation summaries post-interview

Objectives

Participants should aim to:

- ✓ Improve interview quality and depth
- ✓ Reduce interviewer cognitive load
- ✓ Detect resume inconsistencies in real time
- ✓ Encourage structured, competency-based questioning
- ✓ Improve hiring fairness and consistency
- ✓ Provide explainable AI prompts and flags
- ✓ Enable scalable and standardized interview intelligence

Scope & Constraints

In Scope

Participants may build solutions that include:

- Real-time speech-to-text transcription
- Resume parsing and structured information extraction
- NLP-based contradiction detection
- LLM-powered dynamic question generation
- Semantic similarity and fact-checking models
- Real-time prompt dashboard for interviewers

- Inconsistency scoring system
- Post-interview analytics and summary reports
- Confidence scoring for claims made by candidates
- Multi-role support (technical, behavioral, leadership interviews)

Technologies Allowed

Participants may use:

- Large Language Models (LLMs)
- Retrieval-Augmented Generation (RAG)
- Speech-to-Text APIs
- Natural Language Processing (NLP) frameworks
- Knowledge graphs
- Machine learning / deep learning models
- Vector databases
- Real-time streaming pipelines
- Web dashboards
- Any programming language or framework

Data Sources Allowed

Participants may use:

Public datasets for:

- Resume samples (anonymized datasets)
- Interview question banks
- Public job descriptions
- Speech datasets for ASR training
- Open-source conversational datasets

Synthetic or simulated interview data may also be generated for demonstration.

Out of Scope

Participants are NOT required to:

- Integrate directly into proprietary interview systems
- Build full ATS (Applicant Tracking System) solutions
- Provide final hiring recommendations
- Handle sensitive personal data beyond prototype-level examples
- Ensure regulatory compliance certification

Constraints

- Hackathon duration: As specified by organizers
- Prototype-level solution acceptable
- Public or synthetic datasets only
- Must demonstrate real-time or near-real-time capability
- Internet access as per event rules

6 Expected Deliverables

Teams should provide:

- ✓ Working prototype or functional demo
- ✓ Live or recorded demo of interview simulation
- ✓ Source code repository
- ✓ System architecture diagram
- ✓ Resume-to-response validation logic explanation
- ✓ Question generation methodology explanation
- ✓ Short presentation explaining business value

Optional:

- Contradiction detection accuracy metrics
- Precision/Recall for resume mismatch detection
- Example flagged inconsistencies
- UI dashboard mockups
- Interview evaluation report sample