

## Software Requirements Specification (SRS)

### Project Title: AI Interview and Resume Analyzer System (AIRAS)

**Client:** Academic Institutions / EdTech Platforms

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## 1. Introduction

### 1.1 Purpose

The purpose of this document is to define the functional and non-functional requirements of the **AI Interview and Resume Analyzer System (AIRAS)**. The system will simulate a virtual interview using **Meta's LLaMA 3.2** model, evaluate student responses, and provide automated feedback. It will also analyze resumes for quality, clarity, and alignment with industry standards.

### 1.2 Scope

AIRAS is a web-based application intended to:

- Conduct AI-powered technical and HR interviews
  - Analyze and score student responses
  - Provide detailed feedback and improvement suggestions
  - Analyze resumes for structure, grammar, and relevance
  - Support educational institutions in student career readiness
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## 2. Functional Requirements

No	Requirement	Priority
R1	<b>User Registration &amp; Login</b> – Students and administrators can register and log in securely	High
R2	<b>Interview Setup</b> – Users can choose interview type (e.g., HR, Technical, Domain-specific)	High
R3	<b>Interview Execution</b> – LLaMA 3.2 conducts interview in real-time via chat or voice	High
R4	<b>Interview Evaluation</b> – AI evaluates tone, accuracy, confidence, and relevance	High
R5	<b>Feedback Generation</b> – AI generates structured feedback for each response	High
R6	<b>Resume Upload</b> – User uploads their resume (PDF/DOCX)	High
R7	<b>Resume Analysis</b> – Resume is analyzed for formatting, grammar, keywords, etc.	High
R8	<b>Score Summary</b> – Final score and improvement tips for both interview and resume	High

No	Requirement	Priority
R9	<b>Admin Panel</b> – View statistics, manage users, download reports	Medium
R10	<b>Interview History</b> – Students can view past interviews and track progress	Medium

### 3. Non-Functional Requirements

#### 3.1 Performance Requirements

- Should handle **at least 100 concurrent users**
- Interview feedback must be generated within **15 seconds**
- Resume analysis must complete within **10 seconds**

#### 3.2 Security Requirements

- Use **bcrypt** or **argon2** for password hashing
- Use **OAuth2** or **JWT** for secure authentication
- Resume and interview data should be stored **encrypted** in the database
- System accessible only through **HTTPS**

#### 3.3 Software Quality Attributes

- **Usability:** Intuitive UI for both tech-savvy and non-technical users
- **Reliability:** 99.5% uptime
- **Maintainability:** Modular codebase, well-documented
- **Scalability:** Easily scalable with containerization (e.g., Docker + Kubernetes)

#### 3.4 Design Constraints

- Must work on: Chrome 90+, Firefox 88+, Edge 90+
- Frontend: HTML5, TailwindCSS, ReactJS
- Backend: Node.js / Python (Flask or FastAPI)
- AI Model: Meta’s LLaMA 3.2 (API / locally hosted via LAN)
- Resume parser: spaCy / ResumeParser (Python-based)

### 4. System Features (Use Case Highlights)

Use Case	Description
Interview Mode	User selects mode: Mock HR, Technical (DSA, ML, etc.), or Behavior
AI Interaction	LLaMA 3.2 interacts via chat interface and records every reply

Use Case	Description
Live Feedback	Optionally provides basic feedback in real-time
Post Interview Report	Summarizes performance, soft skills, and AI observations
Resume Upload	Simple drag-and-drop interface
Resume Report	Sections: grammar check, ATS score, formatting tips
Dashboard	Interview history, resume versions, feedback reports
Admin Tools	Stats: Most common mistakes, skill gaps, performance trend

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## 5. Assumptions and Dependencies

- Internet/LAN required for model response unless LLaMA is locally deployed
  - Users must provide microphone and webcam permissions for voice-based interviews
  - Resume feedback is limited to English resumes only (initial version)
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## 6. Glossary

- **LLaMA 3.2:** A large language model by Meta used for natural language understanding
  - **ATS:** Applicant Tracking System, used in resume screening
  - **Mock Interview:** Simulated interview environment for preparation
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## 7. Future Enhancements

- Voice analysis (tone, pitch)
- Facial expression detection
- Custom resume templates
- Integration with job portals