**API Documentation for Resume Analysis Tool**

This document outlines all the API endpoints required to support the **Simple AI Search** and **Job Analyzer** features. Each API includes detailed specifications for the request method, URL, request body, response body, and additional notes.

**1. /ask API**

**Description:** Handles user queries to the RAG system and returns a contextual AI response.

* **Method:** POST
* **Endpoint:** /ask
* **Request Body:**

json

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{

"question": "What is the summary of this resume?"

}

**Parameters:**

| **Field** | **Type** | **Required** | **Description** |
| --- | --- | --- | --- |
| question | String | ✅ Yes | The user's query to the RAG model. |

* **Response Body (Success):**

json

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{

"response": "This resume belongs to John Doe. He has experience in software development with a focus on React.js and AWS."

}

**Response Fields:**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| response | String | AI-generated response to the question. |

* **Response Body (Error):**

json

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{

"error": "Failed to generate response"

}

**2. /files-used API**

**Description:** Returns the list of files used to train the current RAG system.

* **Method:** GET
* **Endpoint:** /files-used
* **Request Body:** None
* **Response Body (Success):**

json

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[

"resume1.pdf",

"cover\_letter.pdf",

"portfolio.pdf"

]

**Response Fields:**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| file\_names | Array | List of PDF file names used in the RAG training. |

* **Response Body (Error):**

json

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{

"error": "Failed to retrieve files"

}

**3. /upload API**

**Description:** Uploads a new PDF file to the system to be used for RAG training.

* **Method:** POST
* **Endpoint:** /upload
* **Request Body (Multipart Form Data):**

multipart/form

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file: [binary file]

**Parameters:**

| **Field** | **Type** | **Required** | **Description** |
| --- | --- | --- | --- |
| file | File | ✅ Yes | PDF file to upload. |

* **Response Body (Success):**

json

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{

"success": true,

"message": "File uploaded successfully"

}

**Response Body (Error):**

json

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{

"error": "Only PDF files are allowed"

}

**4. /retrain API**

**Description:** Retrains the RAG model using the files present in the /data directory.

* **Method:** POST
* **Endpoint:** /retrain
* **Request Body:** None
* **Response Body (Success):**

json

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{

"success": true,

"message": "Retraining complete"

}

* **Response Body (Error):**

json

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{

"error": "Error retraining model"

}

**5. /analyze-job API**

**Description:** Analyzes a given job description URL and compares it with the current RAG resume to provide a match score, job summary, and improvement suggestions.

* **Method:** POST
* **Endpoint:** /analyze-job
* **Request Body:**

json

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{

"url": "https://example.com/job-description"

}

**Parameters:**

| **Field** | **Type** | **Required** | **Description** |
| --- | --- | --- | --- |
| url | String | ✅ Yes | The URL of the job description. |

* **Response Body (Success):**

json

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{

"matchScore": 85,

"jobSummary": {

"location": "San Francisco, CA (Remote Friendly)",

"payRange": "$120,000 - $150,000",

"requiredSkills": ["React", "JavaScript", "Node.js", "AWS"],

"experience": "5+ years",

"education": "Bachelor's in Computer Science",

"mandatorySkills": ["React", "Node.js"],

"immigrationSupport": "Available (H1B, Green Card)"

},

"suggestions": [

"Add more emphasis on React.js project experiences",

"Include specific metrics for previous job achievements",

"Highlight cloud computing expertise",

"Add certifications section"

]

}

**Response Fields:**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| matchScore | Integer | Percentage match score between job and resume. |
| jobSummary | Object | Summary of job details. |
| suggestions | Array | List of suggestions to improve the resume. |

* **Response Body (Error):**

json

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{

"error": "Failed to analyze job"

}

**6. /validate-url API (Optional)**

**Description:** Validates the given URL before making a request to the job analysis API.

* **Method:** POST
* **Endpoint:** /validate-url
* **Request Body:**

json

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{

"url": "https://example.com/job-description"

}

**Parameters:**

| **Field** | **Type** | **Required** | **Description** |
| --- | --- | --- | --- |
| url | String | ✅ Yes | The URL to be validated. |

* **Response Body (Success):**

json

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{

"isValid": true

}

**Response Body (Error):**

json

Copy code

{

"error": "Invalid URL"

}

**7. /current-resume API**

**Description:** Returns the current resume file name and a download link.

* **Method:** GET
* **Endpoint:** /current-resume
* **Request Body:** None
* **Response Body (Success):**

json

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{

"resumeName": "John\_Doe\_Resume.pdf",

"downloadLink": "/data/John\_Doe\_Resume.pdf"

}

**Response Fields:**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| resumeName | String | Name of the resume used in the current RAG. |
| downloadLink | String | URL to download the current resume. |

* **Response Body (Error):**

json

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{

"error": "Failed to retrieve resume"

}

**Summary of All APIs**

| **Endpoint** | **Method** | **Purpose** | **Request Body** | **Response Fields** |
| --- | --- | --- | --- | --- |
| /ask | POST | Query RAG and get response | { "question": "..." } | { "response": "..." } |
| /files-used | GET | List files used in RAG training | None | [ "resume1.pdf", "cover\_letter.pdf" ] |
| /upload | POST | Upload a file for RAG | { file: [binary] } | { "success": true } |
| /retrain | POST | Retrain the RAG model | None | { "success": true } |
| /analyze-job | POST | Analyze job vs. resume | { "url": "https://..." } | { "matchScore": 85, "jobSummary": {...} } |
| /validate-url | POST | Validate a job description URL | { "url": "https://..." } | { "isValid": true } |
| /current-resume | GET | Get the current resume details | None | { "resumeName": "John\_Doe.pdf" } |