

# JobAssist: Backend API Documentation

## (Version 1.2.6 - Finalized)

This document describes the current Flask-based RESTful API, implemented in app.py. It manages all data and documents for job applications. All endpoints are numbered sequentially from 1.0 to 12.0.

## 1. Configuration & Environment

The backend connects to PostgreSQL using the following settings:

Parameter	Value (Example/Default)	Notes
dbname	contact_db	The name of the database.
user	jobert	The PostgreSQL user.
password	linkedin	<b>SECURITY NOTE:</b> This password must be changed in a production environment.
host	localhost	The database server host.
UPLOAD_FOLDER	/home/jobert/webapp/contact_app/filestore	Location where files are stored on the server.

## 2. Company Management Endpoints (1.0 - 3.0)

These endpoints manage standardized company profiles in the companies table.

### 1.0 GET /api/companies (Retrieve All Companies)

Retrieves all standardized company profiles.

Detail	Specification
Method	GET
URL	/api/companies

<b>Returns</b>	<b>Structured JSON Object:</b> {"status": "success", "companies": [...]}
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## 2.0 GET /api/next\_company (Get Next Raw Name to Standardize)

Retrieves the next unstandardized company name that needs review.

Detail	Specification
<b>Method</b>	GET
<b>URL</b>	/api/next_company
<b>Authentication</b>	Mandatory (Assumed to be protected)
<b>Returns</b>	<b>JSON Object</b> containing the raw company name.

## 3.0 GET /api/companies/{company\_id}

**Detail:** Retrieves a single, standardized company profile using its unique integer ID. This endpoint is used by the frontend to display detailed company information and pre-populate the standardization form.

Detail	Specification
<b>Method</b>	GET
<b>URL</b>	/api/companies/{company_id}
<b>Authentication</b>	Optional (Used primarily for data retrieval)
<b>Returns</b>	Structured JSON object containing the company profile under the company key.

Success Response Body (200 OK):

The response is wrapped in a consistent structure. The company object contains all standardized company fields:

Field Name	Type	Description
company_id	Integer	Unique identifier for the company profile.
company_name_clean	String	Standardized company name.
headquarters	String (Nullable)	Location of company headquarters.
size_employees	Integer (Nullable)	Total employee count.
annual_revenue	Float (Nullable)	Company's annual revenue value.
revenue_scale	String (Nullable)	Revenue scale (e.g., 'M', 'B').
target_interest	Boolean	High-priority flag.
notes	String (Nullable)	Detailed notes or commentary.

Example Successful Response (200 OK):

```
{
  "status": "success",
  "company": {
    "company_id": 197,
    "company_name_clean": "Alphabet Inc.",
    "headquarters": "Mountain View, CA",
    "size_employees": 156000,
    "annual_revenue": 282.8,
    "revenue_scale": "B",
    "target_interest": true,
    "notes": "Verified against 2024 Q3 earnings report."
  }
}
```

Verification Test Sequence (cURL)

Use this command to retrieve the detailed profile for test company ID 197:

```
curl -X GET http://localhost:8000/api/companies/197
```

Expected Response (Example - 404 Not Found):

If the ID does not exist, the endpoint returns the standard error wrapper:

```
{
  "status": "error",
  "message": "Company ID 999 not found."
}
```

## 4.0 PUT /api/companies/{company\_id}

**Detail:** Updates an existing standardized company profile record in the companies table. This is the main endpoint used by the standardization tool to persist clean, structured data.

Detail	Specification
Method	PUT
URL	/api/companies/{company_id}
Authentication	Mandatory (Verifies user is logged in/authorized for standardization)
Returns	JSON object with status, message, and company_id.

**Request Body** (JSON - Includes all updatable fields):

Field Name	Type	Description
company_name_clean	String	The primary, standardized name for the company.
headquarters	String (Nullable)	The standardized location of the company headquarters.
size_employees	Integer (Nullable)	The total number of

		employees.
<b>annual_revenue</b>	Float (Nullable)	The company's annual revenue value.
<b>revenue_scale</b>	String (Nullable)	The scale of the revenue (e.g., 'M', 'B').
<b>target_interest</b>	Boolean	Flag indicating if this is a high-priority target company.
<b>notes</b>	String (Nullable)	<b>New:</b> Detailed notes or commentary on the company.

## Verification Test Sequence (cURL)

Use the following sequence to test that all fields, especially **notes**, are successfully updated and retrieved for a test ID (e.g., 197):

### Step 1: Execute the PUT Request

This command updates company 197 and includes the test value for notes.

```
curl -X PUT http://localhost:8000/api/companies/197 \
-H "Content-Type: application/json" \
-d '{
  "company_id": 197,
  "company_name_clean": "Alphabet Inc.",
  "headquarters": "Mountain View, CA",
  "size_employees": 156000,
  "annual_revenue": 282.8,
  "revenue_scale": "B",
  "target_interest": true,
  "notes": "Updated via cURL to test the full PUT payload, including notes field persistence."
}'
```

### Expected Response (200 OK):

```
{
  "company_id": 197,
```

```
"message": "Company ID 197 updated successfully.",  
"status": "success"  
}
```

## Step 2: Verify with a GET Request

This command retrieves the record to confirm the changes were saved, specifically looking for the new notes content.

```
curl -X GET http://localhost:8000/api/companies/197
```

### Expected Response (Example - 200 OK):

```
{  
  "company_id": 197,  
  "company_name_clean": "Alphabet Inc.",  
  "headquarters": "Mountain View, CA",  
  "size_employees": 156000,  
  "annual_revenue": 282.8,  
  "revenue_scale": "B",  
  "target_interest": true,  
  "notes": "Updated via cURL to test the full PUT payload, including notes field persistence."  
}
```

## 4. Application Management Endpoints (7.0 - 12.0)

These endpoints manage job application records.

### 7.0 GET /api/applications (User Application Summary)

Retrieves a summary of all job applications belonging to the authenticated user.

Detail	Specification
Method	GET
URL	/api/applications

<b>Authentication</b>	Mandatory (Verifies user_id ownership)
<b>Returns</b>	<b>Structured JSON Object:</b> {"status": "success", "applications": [...]}. Each application object contains company_info and job_title_info.

## 8.0 CRUD /api/applications/uuid:application\\_id (Application Record Management)

This endpoint is used for managing the lifecycle of a single application record using its **UUID**.

Method	Purpose	Request Body	Returns
<b>GET</b>	Retrieves a single, full application record, including nested company_info and job_title_info.	None	Full Application JSON Object.
<b>PUT</b>	Updates all fields for the specified application (e.g., status, date applied).	<b>JSON:</b> Requires the full payload (same structure as 10.0 POST) with updated values.	Status JSON: {"status": "success", "message": "..."}
<b>DELETE</b>	Permanently deletes the application record and all associated documents.	None	Status JSON: {"status": "success", "message": "..."}

## 9.0 POST /api/application/uuid:application\\_id/documents (Document Upload)

**CRITICAL FIX APPLIED.** Uploads a new document (file) associated with an existing job application.

Detail	Specification	Notes
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<b>Method</b>	POST	
<b>URL</b>	/api/application/{application_id}/documents	{application_id} must be a valid <b>UUID</b> .
<b>Content-Type</b>	<b>multipart/form-data</b>	<b>CRITICAL:</b> The request must be submitted as form data.

### Request Body Fields (Form Data) - FINAL CORRECTION

Field Name	Type	Required	Description
<b>document</b>	Binary File	Yes	<b>FIXED:</b> The actual file content to be stored (must use this name for request.files).
<b>document_type_code</b>	String (ENUM)	Yes	<b>FIXED:</b> The document classification code (must use this name for request.form).

### Example curl Request

```
curl -X POST
"[https://api.jobassist.com/api/application/a1b2c3d4-e5f6-7890-1234-567890abcdef/documents](https://api.jobassist.com/api/application/a1b2c3d4-e5f6-7890-1234-567890abcdef/documents)" \
-H "Authorization: Bearer <YOUR_AUTH_TOKEN>" \
-F "document=@./my_resume.pdf" \
-F "document_type_code=RESUME"
```

## 10.0 POST /api/applications (Application Creation)

Creates a new job application record. This endpoint handles company and job title lookups/standardization before inserting the application.



Detail	Specification
Method	POST
URL	/api/applications
Request Body	<b>JSON</b> (Requires company_name_clean, title_name, date_applied, current_status)
Returns	<b>JSON Object:</b> {"status": "success", "application_id": "..."}

## 11.0 APPLICATION AGGREGATE API:

### GET /api/applications

This endpoint retrieves a comprehensive list of job applications for the authenticated user, filtered by a specific company. The response is highly structured, nesting company, job title, and document information within each application record.

#### Detail Specification

Detail	Specification	Notes
Method	GET	
URL	/api/applications	
Query Param	company_id=<int>	<b>Mandatory.</b> Must be a valid integer ID for the target company.
Authentication	Mandatory	Requires a valid user session (User ID filter enforced on all returned data).
Response	JSON Object	Encapsulated response with root key applications.

## cURL Testing Example

This command tests the endpoint using a placeholder Company ID (24) and requires an Authorization header with a valid user token.

# Replace <YOUR\_AUTH\_TOKEN> with a valid user session token.

# Replace 24 with a company\_id known to have applications.

```
curl -X GET \  
  -H "Authorization: Bearer <YOUR_AUTH_TOKEN>" \  
  "http://localhost:5000/api/applications?company_id=24"
```

## Response Schema (JSON)

The response is a structured object containing a list of application records.

```
{  
  "status": "success",  
  "applications": [  
    {  
      "application_id": "e7b0c5d6-...",  
      "date_applied": "2025-10-25",  
      "current_status": "INTERVIEW",  
  
      "company_info": {  
        "company_id": 24,  
        "company_name_clean": "3545 Consulting-Global"  
        // CRITICAL: Frontend must access this field explicitly.  
      },  
  
      "job_title_info": {  
        "job_title_id": 150,  
        "title_name": "Senior Data Analyst"  
        // CRITICAL: Frontend must access this field explicitly.  
      },  
  
      "documents": [  
        {  
          "document_id": "4a1d82f0-...",  
          "document_type": "RESUME",  
          "file_path": "4a1d82f0-...",  
          "original_filename": "My_Resume_Q4.pdf"
```

```

    },
    // ... more document objects
  ]
},
// ... more application objects
]
}

```

## Application Object Fields

Field	Type	Description	Frontend Access Path (Example)
application_id	UUID (String)	Unique ID for the application record.	app.application_id
date_applied	Date (String)	The date the user applied (YYYY-MM-DD).	app.date_applied
current_status	String	Current status of the application (e.g., APPLIED, INTERVIEW).	app.current_status
<b>company_info</b>	Object	<b>Nested object</b> containing standardized company data.	
<b>job_title_info</b>	Object	<b>Nested object</b> containing standardized job title data.	
<b>documents</b>	Array	<b>Nested array</b> of all documents uploaded for this application.	

## Nested company\_info Object

Field	Type	Description	CRITICAL Access Path
company_id	Integer	Unique ID of the standardized company.	app.company_info. company_id
company_name_clean	String	<b>The standardized, human-readable name.</b>	app.company_info. company_name_clean

### Nested job\_title\_info Object

Field	Type	Description	CRITICAL Access Path
job_title_id	Integer	Unique ID of the standardized job title.	app.job_title_info.job_title_id
title_name	String	<b>The human-readable job title name.</b>	app.job_title_info.title_name

## 12.0 GET /api/documents/{document\_id} (Document Download)

Securely retrieves the binary file content for a specific document.

Detail	Specification	Notes
Method	GET	
URL	/api/documents/{document_id}	{document_id} must be the <b>UUID</b> returned by Endpoint 9.0 or retrieved via 11.0.
Authentication	Mandatory	Server performs an

		<b>ownership check</b> against the document ID.
<b>Response</b>	<b>Binary File Stream</b>	The response is the raw file content (application/octet-stream), <i>not</i> a JSON object.
<b>Header</b>	Content-Disposition: attachment	This forces the browser to download the file using the original filename.

## CRITICAL: Download URL Construction

The frontend team must construct the full URL by appending the **document\_id** (which is a UUID string) to the base path. **Do not use the application\_id here.**

Parameter	Example Value
<b>Base URL</b>	https://api.jobassist.com/
<b>Document ID</b>	9f142b78-c1a7-4d43-9e45-12a8f89c6d30

Full, Formatted Download URL Example:

[BASE\_URL]/api/documents/9f142b78-c1a7-4d43-9e45-12a8f89c6d30

## Error Response

If the document is not found, or if the authenticated user does not own the application associated with the document, the server will return a standard error object with a **404 Not Found** status to prevent unauthorized probing of existing document IDs.

```
{
  "status": "error",
  "message": "File not found or unauthorized access."
}
```

## 13.0 GET /api/companies/int:company\_id/contacts

Retrieves a list of all contact records that are associated with a **standardized company profile**. The association is made through the company\_name\_mapping table, linking the

contacts.company (raw name) field to the standardized companies.company\_id.

## Detail Specification

Detail	Specification
Method	GET
URL	/api/companies/<int:company_id>/contacts
Authentication	Mandatory (A user session is assumed, although the user_id check is currently bypassed in the SQL query due to database schema limitations).
URL Parameter	<b>company_id</b> (Integer, required in URL path)
Purpose	Feeds a detail view or contact list for a specific, standardized company profile.

## CURL Example

Assuming the server is running on localhost:5000 and company\_id is 1234. The inclusion of a header like Authorization is mandatory for authenticated endpoints, even if the backend uses a mock user ID.

```
curl -X GET 'http://localhost:5000/api/companies/1234/contacts' \
-H 'Authorization: Bearer <Your_Auth-Token>'
```

## Successful Response (HTTP 200 OK)

The endpoint adheres to the universal rule for array returns, wrapping the list in a structured object.

```
{
  "status": "success",
  "company_id": 1234,
  "contacts": [
    {
      "contact_id": 1,
      "first_name": "Jane",
      "last_name": "Doe",

```

```
"email_address": "jane.doe@example.com",
"position": "Senior Developer",
"connected_on": "2024-05-15",
"associated_raw_name": "Example Corp"
},
{
  "contact_id": 2,
  "first_name": "John",
  "last_name": "Smith",
  "email_address": "john.smith@excorp.com",
  "position": "Talent Acquisition",
  "connected_on": "2024-05-10",
  "associated_raw_name": "Ex. Corp."
}
]
}
```

## Response Fields

Field Name	Type	Description
<b>status</b>	String	Always "success".
<b>company_id</b>	Integer	The standardized company ID requested in the URL.
<b>contacts</b>	Array of Objects	The list of contact records associated with the company.
<b>contact_id</b>	Integer	Unique primary key for the contact.
<b>position</b>	String	The contact's job title at the time of connection.
<b>connected_on</b>	Date	The date the connection was established (YYYY-MM-DD format).
<b>associated_raw_name</b>	String	The original, raw company name from the contacts

		table that mapped to this company ID.
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Error Responses

Status Code	Reason	Description
400 Bad Request	Invalid company_id format (e.g., negative or non-integer).	Returns {"status": "error", "message": "Invalid company ID format."}
500 Internal Error	Database connection failure or PostgreSQL execution error (e.g., table schema issues).	Returns {"status": "error", "message": "Database error retrieving contacts: [details]"}

A. Job Title Endpoints ()

These endpoints manage standardized job titles.

A.0 GET /api/job\_titles (Retrieve All Titles) - NOT IMPLEMENTED

Retrieves all standardized job titles currently stored in the system.

Detail	Specification
Method	GET
URL	/api/job_titles
Returns	<b>Structured JSON Object:</b> {"status": "success", "job_titles": [...]}

B.0 GET /api/job\_titles/int:title\_id (Retrieve Single Title) - NOT IMPLEMENTED

Retrieves a single job title record by its ID (Inferred Standard).



## C.O POST/PUT/DELETE /api/job\_titles/int:title\\_id (CRUD) - NOT IMPLEMENTED

Standard CRUD operations for job titles (Inferred Standard).

## 5. Standard Response Schemas

### Successful List Response (Status 200 OK)

All successful API calls returning a list of resources use this structured wrapper.

```
{
  "status": "success",
  "[resource_name]s": [ /* array of objects */ ]
}
```

### Successful Creation Response (Status 201 Created)

Field Name	Type	Description
<b>status</b>	String	Always "success".
<b>message</b>	String	Human-readable confirmation.
<b>document_id / application_id</b>	UUID/Integer	The unique ID of the newly created resource.

### Error Response Schema (All Failures)

All error responses return a JSON object for reliable client-side error handling.

Status Code	Example Error Message	Client-Side Interpretation
<b>400 Bad Request</b>	Missing required field: document_type_code	Client-side payload issue.
<b>401 Unauthorized</b>	Authentication required.	User session is missing or invalid.
<b>404 Not Found</b>	File not found or	Resource not found or

	unauthorized access.	ownership check failed.
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## 6. Version Control

Version	Date	Changes
1.0.0	2025-10-25	Initial documentation for Company Profiles (1.0, 2.0) and Application creation (10.0).
1.1.0	2025-10-27	Added Document Upload (9.0) and Download (12.0) endpoints.
1.2.0	2025-10-30	MAJOR RE-INDEXING and CRITICAL FIELD FIXES. Confirmed correct fields for 9.0 and applied universal response wrappers for all list endpoints.
1.2.1	2025-10-30	Detail Fix: Restored full CRUD specification for Endpoint <b>8.0</b> (GET, PUT, DELETE for single application UUID).
1.2.2	2025-10-30	<b>Documentation Fix:</b> Updated Request Body Fields table for Endpoint <b>9.0</b> to correctly list <b>document</b> and <b>document_type_code</b> for 100% contract compliance.