# API Endpoints for Job Application System

# For Recruiters - Job Posting Dashboard

## 1. Create a New Job Posting

**Endpoint:** *POST /job/*

**Form Data:**

- *company_id* (int, required): Company ID
- *role* (string, required): Job title/role (e.g., "Senior Software Engineer")
- *location* (string, optional): Job location (e.g., "New York, NY" or "Remote")
- *salary* (string, optional): Salary range (e.g., "$100k-150k")
- *employment_type* (string, optional): "Full-time", "Part-time", "Contract", "Internship" (default: "Full-time")
- *required_experience* (int, required): Years of experience required
- *jd_pdf* (file, required): Job description PDF file

**Example Response:**

```
{
  "job": {
    "id": 1,
    "company_id": 1,
    "role": "Senior Software Engineer",
    "location": "San Francisco, CA",
    "salary": "$120k-180k",
    "employment_type": "Full-time",
    "required_experience": 5,
    "created_at": "2026-02-12T10:30:00",
    "skills_stored": 25
  },
  "message": "Job created and stored in database successfully"
}
```

## 2. View Applications for a Job

**Endpoint:** *GET /job/{job_id}/applications*

**Query Parameters:**

- *status_filter* (optional): Filter by decision status

**Example Response:**

```
{
  "job": {
    "id": 1,
    "role": "Senior Software Engineer",
    "company_id": 1
  },
  "total_applications": 50,
  "statistics": {
    "fast_track": 5,
    "selected": 15,
    "hire_pooled": 20,
    "rejected": 10
  },
  "applications": [...]
}
```

# For Candidates - Job Browsing & Application

## 1. Browse All Available Jobs

**Endpoint:** *GET /job/*

**Query Parameters:**

- *company_id* (optional): Filter by company
- *location* (optional): Filter by location (partial match)
- *employment_type* (optional): Filter by employment type
- *skip* (optional): Pagination offset (default: 0)
- *limit* (optional): Results per page (default: 100)

**Example Response:**

```
{
  "total": 25,
  "showing": 10,
  "skip": 0,
  "limit": 10,
  "jobs": [
    {
      "id": 1,
      "role": "Senior Software Engineer",
      "company_id": 1,
      "company_name": "Tech Corp",
      "location": "San Francisco, CA",
      "salary": "$120k-180k",
      "employment_type": "Full-time",
      "required_experience": 5,
      "created_at": "2026-02-12T10:30:00",
      "application_count": 50,
      "skills_preview": ["Python", "FastAPI", "PostgreSQL", "Docker", "AWS"]
    }
  ]
}
```

## 2. View Job Details

**Endpoint:** *GET /job/{job_id}*

**Example Response:**

```
{
  "id": 1,
  "company_id": 1,
  "company_name": "Tech Corp",
  "company_description": "Leading technology company...",
  "role": "Senior Software Engineer",
  "location": "San Francisco, CA",
  "salary": "$120k-180k",
  "employment_type": "Full-time",
  "required_experience": 5,
  "jd_text": "Full job description text...",
  "created_at": "2026-02-12T10:30:00",
  "application_count": 50,
  "skills_required": ["Python", "FastAPI", "PostgreSQL", ...],
  "technical_skills": ["Python", "FastAPI", "Docker"],
  "soft_skills": ["Communication", "Leadership"]
}
```

## 3. Apply to a Job

**Endpoint:** *POST /apply/{job_id}*

**Form Data:**

- *name* (string, required): Full name
- *email* (string, required): Email address
- *mobile* (string, required): Mobile/phone number
- *linkedin* (string, optional): LinkedIn profile URL
- *github* (string, optional): GitHub profile URL
- *experience* (int, required): Years of experience
- *resume_pdf* (file, required): Resume PDF file

**Example Response:**

```
{
  "application_id": 101,
  "candidate_id": 50,
  "job_id": 1,
  "decision": "Selected",
  "scores": {
    "skills_match": 85.5,
    "experience_match": 90.0,
    "overall_score": 87.8
  },
  "message": "Application submitted successfully"
}
```

# Frontend Implementation Guide

## Job Listing Page (For Candidates)

1. **Fetch all jobs**: *GET /job/*
2. **Display job cards** with:
    - Company name
    - Job title
    - Location
    - Salary
    - Employment type
    - Experience required
    - Number of applicants
    - "Apply Now" button
3. **Click on job card**: Navigate to job detail page

## Job Detail Page

1. **Fetch job details**: *GET /job/{job_id}*
2. **Display full information**:
    - All job fields
    - Full job description
    - Required skills
    - Company information
3. **Apply button**: Opens application form modal

## Application Form

1. **Form fields**:
    - Name (text input)
    - Email (email input)
    - Mobile (tel input)
    - LinkedIn (url input, optional)
    - GitHub (url input, optional)
    - Experience (number input)
    - Resume (file input, accept=".pdf")
2. **On submit**:
    - *POST /apply/{job_id}* with form data
    - Show success message with application ID and decision
    - Redirect to application status page

## Recruiter Dashboard

1. **Job Creation Form**:

- Company selection (dropdown)
- Job title (text input)
- Location (text input)
- Salary (text input)
- Employment type (dropdown: Full-time, Part-time, Contract, Internship)
- Required experience (number input)
- Job description (file input, accept=".pdf")

2. **Submit**: *POST /job/* with form data
3. **View Applications**:
   - List all jobs for company
   - Click on job to see applications: *GET /job/{job_id}/applications*
   - Filter by status

## Database Migration

Before using the new features, run the migration script:

```
cd backend
python add_new_columns.py
```

This will add:

- *mobile* column to *candidates* table
- *location* column to *jobs* table
- *employment_type* column to *jobs* table

# Candidate Master Endpoint

## Get Complete Candidate Profile

**Endpoint:** *GET /candidate/{candidate_id}/master*

**Description:**

This is a comprehensive master endpoint that returns all details about a candidate including:

- Complete personal information (name, email, mobile, LinkedIn, GitHub, experience)
- All skills extracted from resume
- Complete list of all job applications
- For each application:
- Full job details (role, location, salary, job description, required skills)
- Company information
- All scores (Role Fit Score, Domain Competency Score, Experience Level Compatibility, Composite Score)
- Ranking among all applicants
- Decision status (Selected/Rejected/Pending)
- Decision reasoning and detailed explanation
- Fraud detection information
- Skill match analysis
- Application status

**Example Request:**

```
GET /candidate/1/master
```

**Example Response:**

```
{
  "candidate_profile": {
    "candidate_id": 1,
    "name": "John Doe",
    "email": "john.doe@example.com",
    "mobile": "+1234567890",
    "linkedin": "https://linkedin.com/in/johndoe",
    "github": "https://github.com/johndoe",
    "years_of_experience": 5,
    "skills": ["Python", "JavaScript", "React", "Node.js", "SQL"],
    "resume_text": "Full resume text...",
    "profile_created_at": "2026-01-15T10:00:00"
  },
  "application_summary": {
    "total_applications": 10,
    "selected": 3,
    "rejected": 5,
    "pending": 2,
    "average_composite_score": 78.5,
    "best_application": {
      "application_id": 5,
      "job_role": "Senior Python Developer",
      "composite_score": 92.3,
      "decision": "Selected",
      "rank": 1
    }
  },
  "applications": [
    {
      "application_id": 5,
      "applied_at": "2026-02-10T14:30:00",
      "status": "evaluated",
      "job_details": {
        "job_id": 10,
        "role": "Senior Python Developer",
        "location": "New York, NY",
        "salary": "$120k-150k",
        "employment_type": "Full-time",
        "required_experience": 5,
        "job_description": "We are looking for...",
        "required_skills": ["Python", "Django", "PostgreSQL", "Docker"]
      },
      "company_details": {
        "company_id": 2,
        "company_name": "Tech Corp Inc",
        "company_description": "Leading tech company..."
      },
      "scores": {
        "role_fit_score": 88.5,
        "domain_competency_score": 92.0,
        "experience_level_compatibility": 95.0,
        "composite_score": 92.3,
        "rank": 1,
        "rank_description": "Ranked #1"
      },
      "decision": {
        "status": "Selected",
        "reason": "Excellent match for the role with strong technical skills",
        "detailed_explanation": {
          "strengths": ["Strong Python expertise", "Relevant experience"],
          "concerns": []
        }
      },
      "fraud_detection": {
        "fraud_flag": false,
        "sim
... (truncated)
```

**Use Cases:**

- Complete candidate profile view for HR dashboard
- Candidate's application history tracking
- Performance analysis across multiple applications
- Export candidate data for reporting
- Comprehensive audit trail

# Candidate Master Endpoint - All Candidates

## Get Complete Details for All Candidates

**Endpoint:** *GET /candidate/master/all*

**Query Parameters:**

- *skip* (int, optional, default: 0): Number of candidates to skip for pagination
- *limit* (int, optional, default: 100, max: 500): Maximum number of candidates to return

**Description:**

This endpoint returns comprehensive details for ALL candidates in the system with pagination support. For each candidate, it includes the same detailed information as the single candidate master endpoint.

**Example Request:**

```
GET /candidate/master/all?skip=0&limit=50
```

**Example Response:**

```
{
  "total_candidates": 250,
  "showing": 50,
  "skip": 0,
  "limit": 50,
  "global_statistics": {
    "total_applications": 523,
    "total_selected": 145,
    "total_rejected": 298,
    "total_pending": 80
  },
  "candidates": [
    {
      "candidate_profile": {
        "candidate_id": 1,
        "name": "John Doe",
        "email": "john@example.com",
        "mobile": "+1234567890",
        "linkedin": "https://linkedin.com/in/johndoe",
        "github": "https://github.com/johndoe",
        "years_of_experience": 5,
        "skills": ["Python", "JavaScript", "React", "Node.js"],
        "resume_text": "Full resume text...",
        "profile_created_at": "2026-01-15T10:00:00"
      },
      "application_summary": {
        "total_applications": 10,
        "selected": 3,
        "rejected": 5,
        "pending": 2,
        "average_composite_score": 78.5,
        "best_application": {
          "application_id": 5,
          "job_role": "Senior Python Developer",
          "composite_score": 92.3,
          "decision": "Selected",
          "rank": 1
        }
      },
      "applications": [
        {
          "application_id": 5,
          "applied_at": "2026-02-10T14:30:00",
          "status": "evaluated",
          "job_details": { },
          "company_details": { },
          "scores": { },
          "decision": { },
          "fraud_detection": { },
          "skill_analysis": { }
        }
      ]
    }
  ]
}
```

**Features:**

- Returns all candidates with complete details
- Pagination support (max 500 candidates per request)
- Global statistics showing totals across all candidates
- Each candidate includes full profile, applications, and analysis
- Efficient for bulk data export and system-wide reporting

**Use Cases:**

- Admin dashboard with complete candidate database
- Bulk export for HR analytics and reporting
- System-wide statistics and insights
- Candidate benchmarking and comparison
- Data migration and backup
- Mass processing and analysis