**Table Descriptions**

**CompanyEmployee**

Stores details of employees who are either **HR**, **recruiters**, or **admins** that manage job postings and candidates.

* Core attributes: employee\_id, name, email, phone, role, password\_hash, timestamps.
* Role field enables differentiated permissions and feature access.

**Job**

Represents job postings made by company employees.

* Attributes include job\_id, title, description, location, and the posted\_by reference to the employee who created the post.
* Status tracks whether a posting is open or closed.

**Candidate**

Contains all candidate profile data.

* Key fields: candidate\_id, name, email, phone, resume\_file (for file location or URL), parsed\_resume (machine-extracted text), and timestamps.
* Ensures uniqueness via email, centralizing applicant data.

**Application**

Links candidates with jobs they've applied to.

* Connects via foreign keys to Job and Candidate.
* ai\_score indicates how well the candidate matches the job (AI-driven), and status tracks the application's stage (e.g., pending, rejected, interviewed).

**ApplicationProgress**

Logs every change made to an application’s status, providing auditability and timeline tracking.

* Tracks who updated status (HR or system), when it was changed, new status, and comments.
* Useful for process visibility and reporting.

**EmailLog**

Records all emails sent regarding an application, whether automatic or manual.

* Details recipients, subjects, message body, send status, and type (e.g., rejection, interview invite).
* Facilitates compliance and communication history.

**Relationships Overview**

| **Table** | **Key Relationships/References** | **Main Purpose** |
| --- | --- | --- |
| CompanyEmployee | Primary user management; referenced by Job & ApplicationProgress | HR/Admin data, permissions, authentication |
| Job | posted\_by references CompanyEmployee | Posts jobs, links to HR who created |
| Candidate | Primary applicant entity | Stores applicant info, ensures uniqueness |
| Application | job\_id references Job, candidate\_id references Candidate | Connects jobs and candidates, tracks application state |
| ApplicationProgress | application\_id references Application, updated\_by references CompanyEmployee | Logs progress, links to application and HR/system |
| EmailLog | application\_id references Application | Records email communication per application |

**Workflow: HR-Centric**

1. **Account Creation:**  
   HR registers and is added to **CompanyEmployee**.
2. **Job Posting:**  
   An HR posts a job—creates a record in **Job** with posted\_by as their employee\_id.
3. **Candidate Application:**  
   A job seeker applies, creating entries in both **Candidate** and **Application**.
4. **Resume Parsing & Scoring:**  
   The system analyzes the resume and updates **Application** (ai\_score, status field).
5. **Automated Emails:**  
   Rejections and other notifications are sent, recorded in **EmailLog**.
6. **Shortlisting:**  
   Top candidates (based on score/status) are visible to HR via a dashboard listing applications.
7. **Progress Updates:**  
   HR can advance or modify candidate statuses (e.g., move to interview), captured in **ApplicationProgress** for historical tracking.