**Project: JobNest**

*Last updated: 17-04-2025*

# ER DIAGRAM

# 

# Entity Overview

## Users table

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| id | int | PK, auto-increment | Unique user ID |
| name | Varchar (255) |  | Full name |
| email | Varchar (255) | UNIQUE | User’s email |
| password | Varchar (255) |  | Hashed password |
| role | Varchar (50) |  | "job\_seeker" or "recruiter" |
| created\_at | timestamp |  | Account creation time |
| profile\_picture | Varchar (255) |  | Optional profile image path |

## Job Seeker Profiles

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| user\_id | int | PK, UNIQUE, FK → users.id | Reference to user |
| phone | Varchar (20) |  | Contact number |
| skills | text |  | Comma-separated skill list |
| experience\_level | Varchar (100) |  | Beginner, Intermediate, Expert |

## Recruiter Profiles

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| user\_id | int | PK, UNIQUE, FK → users.id | Reference to user |
| company\_id | int | FK → companies.id | Associated company |
| phone | Varchar (20) |  | Recruiter’s phone |
| name | Varchar (255) |  | Name of the recruiter |

## Companies

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| id | int | PK, auto-increment | Unique company ID |
| name | Varchar (255) |  | Company name |
| website | Varchar (255) |  | Website URL |
| description | Varchar (1000) |  | Company overview |
| location | Varchar (255) |  | Headquarters or base city |

## Jobs

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| id | int | PK, auto-increment | Unique job ID |
| recruiter\_id | int | FK → recruiter\_profiles.user\_id | Recruiter who posted the job |
| title | Varchar (255) |  | Job title |
| description | text |  | Job details |
| location | Varchar (255) |  | Job location |
| salary\_min | int |  | Minimum salary |
| salary\_max | int |  | Maximum salary |
| type | Varchar (50) |  | Full-time, part-time, etc. |
| required\_skills | text |  | Skills required |
| experience\_level | Varchar (100) |  | Entry/Mid/Senior level |
| status | Varchar (50) |  | Open/Closed |
| created\_at | timestamp |  | Posting time |

## Applications

| Column | Type | Constraints | Description |
| --- | --- | --- | --- |
| id | int | PK, auto-increment | Application ID |
| job\_seeker\_id | int | FK → job\_seeker\_profiles.user\_id | Applicant |
| job\_id | int | FK → jobs.id | Job being applied to |
| status | Varchar (50) |  | Pending, Accepted, Rejected |
| applied\_at | timestamp |  | Application time |

## Resumes

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| id | int | PK, auto-increment | Resume ID |
| job\_seeker\_id | int | FK → job\_seeker\_profiles.user\_id | Owner of the resume |
| file\_name | Varchar (255) |  | Original file name |
| file\_path | Varchar (500) |  | Server file path |
| uploaded\_at | timestamp |  | Upload time |

## Saved Jobs

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| id | int | PK, auto-increment | Saved job ID |
| job\_seeker\_id | int | FK → job\_seeker\_profiles.user\_id | Job seeker who saved the job |
| job\_id | int | FK → jobs.id | Job that was saved |
| saved\_at | timestamp |  | When the job was saved |

# Entity Relationships (ER)

* **Users** ⇄ job\_seeker\_profiles (1:1)
* **Users** ⇄ recruiter\_profiles (1:1)
* **Recruiter\_profiles** → companies (Many recruiters per company)
* **Recruiter\_profiles** → jobs (1:N)
* **Jobs** ⇄ applications (1:N)
* **Jobs** ⇄ saved\_jobs (1:N)
* **Job\_seekers** ⇄ resumes (1:N)
* **Job\_seekers** ⇄ applications, saved\_jobs (1:N)

# DBML Script

*-- Users table: stores all registered users (job seekers and recruiters)*

Table users {

  id int [pk, increment] *-- Primary key*

  name varchar(255) *-- Full name*

  email varchar(255) [unique] *-- Unique email used for login*

  password varchar(255) *-- Hashed password*

  role varchar(50) *-- Either 'job\_seeker' or 'recruiter'*

  created\_at timestamp *-- Account creation timestamp*

  profile\_picture varchar(255) *-- Path to profile picture (optional)*

}

*-- Job seeker profile table: extended data for users with role 'job\_seeker'*

Table job\_seeker\_profiles {

  user\_id int [pk, unique, ref: > users.id] *-- One-to-one relation with users*

  phone varchar(20) *-- Contact number*

  skills text *-- Comma-separated list of skills*

  experience\_level varchar(100) *-- e.g., Beginner, Intermediate, Expert*

}

*-- Recruiter profile table: extended data for users with role 'recruiter'*

Table recruiter\_profiles {

  user\_id int [pk, unique, ref: > users.id] *-- One-to-one relation with users*

  company\_id int [ref: > companies.id] *-- Associated company*

  phone varchar(20) *-- Contact number*

  name varchar(255) *-- Name of the recruiter*

}

*-- Companies table: holds data about companies who post jobs*

Table companies {

  id int [pk, increment] *-- Primary key*

  name varchar(255) *-- Company name*

  website varchar(255) *-- Official website URL*

  description varchar(1000) *-- Description of the company*

  location varchar(255) *-- City or location*

}

*-- Jobs table: holds all job listings posted by recruiters*

Table jobs {

  id int [pk, increment] *-- Primary key*

  recruiter\_id int [ref: > recruiter\_profiles.user\_id] *-- Posted by recruiter*

  title varchar(255) *-- Job title*

  description text *-- Detailed job description*

  location varchar(255) *-- Location of the job*

  salary\_min int *-- Minimum salary*

  salary\_max int *-- Maximum salary*

  type varchar(50) *-- Full-time, Part-time, Internship, etc.*

  required\_skills text *-- Required skills (comma-separated)*

  experience\_level varchar(100) *-- Experience required*

  status varchar(50) *-- Open, Closed, or Draft*

  created\_at timestamp *-- Posting time*

}

*-- Applications table: keeps track of job applications submitted by seekers*

Table applications {

  id int [pk, increment] *-- Primary key*

  job\_seeker\_id int [ref: > job\_seeker\_profiles.user\_id] *-- Applicant reference*

  job\_id int [ref: > jobs.id] *-- Job being applied to*

  status varchar(50) *-- Status: Pending, Accepted, Rejected*

  applied\_at timestamp *-- Time of application*

}

*-- Resumes table: stores uploaded resume files by job seekers*

Table resumes {

  id int [pk, increment] *-- Primary key*

  job\_seeker\_id int [ref: > job\_seeker\_profiles.user\_id] *-- Resume owner*

  file\_name varchar(255) *-- Original file name*

  file\_path varchar(500) *-- File path on server or cloud*

  uploaded\_at timestamp *-- Upload timestamp*

}

*-- Saved jobs table: keeps track of jobs bookmarked by seekers*

Table saved\_jobs {

  id int [pk, increment] *-- Primary key*

  job\_seeker\_id int [ref: > job\_seeker\_profiles.user\_id] *-- User who saved*

  job\_id int [ref: > jobs.id] *-- Saved job reference*

  saved\_at timestamp *-- When it was saved*

}

# Notes

* All timestamps use server time (UTC).
* All FK relationships ensure **referential integrity** using InnoDB engine.
* Role-based access: role column in users table defines behavior in the system.