eduStats: Domain Tables

IDENTITY

- Individuals
  - (individual_id UUID PRIMARY KEY, first_name VARCHAR (100), last_name VARCHAR (100), birth_year INT, country_code VARCHAR (10), created_at TIMESTAMP);
- Organizations
  - (organization_id UUID PRIMARY KEY, name (VARCHAR (255), organization_type VARCHAR (10), country_code VARCHAR (10), created_at TIMESTAMP);

employers, schools, certifying bodies

COMPETENCY ONTOLOGY

Skills framework

- Competency Domains
  - competency_domains (domains_id UUID PRIMARY KEY, domain_name VARCHAR (150), description TEXT);
- Competency Clusters
  - competency_clusters (cluster_id UUID PRIMARY KEY, domain_id UUID REFERENCES competency_domains (domain_id), cluster_name VARCHAR (150), description TEXT);
- Core Competencies
  - competencies (competency_id UUID PRIMARY KEY, cluster_id UUID REFERENCES competency_clusters (cluster_id), competency_name VARCHAR (200), definition TEXT, proficiency _scale_max INT DEFAULT 7, transferability_index NUMERIC, automation_risk_score NUMERIC, version INT);
- Skill Indicators
  - skill_indicators (indicator_id UUID PRIMARY KEY, compentency_id UUID REFERENCES competencies (competencies_id), description TEXT);

OCCUPATION & INDUSTRY

Job classification (Global)

- Global Industry & Occupation Tables
  - Industries
    - industries (industry_code VARCHAR (20) PRIMARY KEY, industry_name VARCHAR (200);
  - Occupations
    - occupations (occupation_code VARCHAR (20) PRIMARY KEY, occupation_name VARCHAR (200), description TEXT);
  - Occupation Competencies
    - occupation_competencies (occupation_code VARCHAR (20) REFERENCES occupations (occupation_code), compentency_id UUID REFERENCES compentencies (competency_id), required_level INT, importance_weight NUMERIC, PRIMARY KEY (occupation_code, competency_id):

aligns w/ International Labour Org Occupation framework

aligns w/ N. American Industry Classification System

EVIDENCE

Assessment/Tr...

- Assessment & Testing Framework
  - Assessments
    - assessments (assessment_id UUID PRIMARY KEY, name VARCHAR (200), issuing_org_id UUID REFERENCES organizations (organizations_id), assessment_type VARCHAR (50), country_code VARCHAR (10), version INT);
  - Assessment Competencies
    - assessment_compentencies (assessment_id UUID REFERENCES assessments (assessment_id), compentency_id UUID REFERENCES compentencies (compentency_id), measured_level INT, weight NUMERIC, PRIMARY KEY (assessment_id, compentency_id);
  - Individual assessments
    - individual_assessments (record_id UUID PRIMARY KEY, individual_id UUID REFERENCES individuals (individual_id), assessment_id UUID REFERENCES assessments (assessment_id), score NUMERIC, percentile NUMERIC, attempt_date DATE, verification_status VARCHAR (50);
- Certification & Training
  - Certifications
    - certifications (certifications_id UUID PRIMARY KEY, certification_name VARCHAR (200), issuing_org_id UUID REFERENCES organizations (organization_id), required_hours INT, renewal_cycle_years INT);
  - Certification Competencies
    - certification_competencies (certification_id UUID REFERENCES certifiations (certification_id), competency_id UUID REFERENCES compentencies (compentency_id), required_level INT, PRIMARY KEY (certification_id, competency_id);
  - training programs
    - training_programs (training_id UUID PRIMARY KEY), name VARCHAR (200), provider_org_id UUID REFERENCES organizations (organization_id), modality VARCHAR (50), total_hours INT);
  - training competencies
    - training_compentencies (training_id UUID REFERENCES training_programs (training_id), competency_id UUID REFERENCES competencies (competency_id), hours_contributed INT, PRIMARY KEY (training_id, compentency_id);

includes diplomas, GED, SAT, GMAT, etc

RESUME SYSTEM

de/re construction

- Raw Resume Storage
  - resumes (resume_id UUID PRIMARY KEY, individual_id UUID REFERENCES individuals (individual_id), original_text TEXT, uploaded_at TIMESTAMP);
- deconstructed resume skills
  - resume_skills_extracts (extract_id UUID PRIMARY KEY, resume_id UUID REFERENCES resumes (resume_id), competency_id UUID REFERENCES competencies (competency_id), indicator_id UUID REFERENCES skill_indicators (indicator_id), confidence_score NUMERIC);
- A.I. Generated Resume Variants
  - resume_variants (variant_id UUID PRIMARY KEY, individual_id UUID REFERENCES invidivuals (individual_id), target_occupation VARCHAR (20), generated_text TEXT, match_score NUMERIC, created_at TIMESTAMP);
- Job Matching
  - job_postings (job_id UUID PRIMARY KEY, employer_id UUID REFERENCES organizations (organization_id), occupation_code VARCHAR (20), description TEXT, posted_at TIMESTAMP
- Job Competency Requirements
  - job_competencies (job_id UUID REFERENCES job_postings (job_id), competency_id UUID REFERENCES competencies (competency_id, required_level INT, weight NUMERIC, PRIMARY KEY (job_id, competency_id);
- Job Match Results
  - job_matches (match_id UUID PRIMARY KEY, individual_id UUID REFERENCES individuals (individual_id), job_id UUID REFERENCES job_postings (job_id), match_score NUMERIC), readiness_level VARCHAR (50), evaluated_at TIMESTAMP);

Skills Indicator Profile CORE ENGINE

- Skill Profiles
  - skills_profiles (profile_id UUID PRIMARY KEY, individual_id UUID REFERENCES individuals (individual_id), competency_id UUID REFERENCES compentencies (competency_id), current_level INT, evidence_weight NUMERIC, verification_score NUMERIC, last_updated TIMESTAMP);

table aggregates evidence from: assessments, training, certifications, appraisals, resumes

EMPLOYMENT

Roles/Employers/app...

- employment records
  - employment_records (employmennt_id UUID PRIMARY KEY, individual_id UUID REFERENCES individuals (individual_id), employher_id UUID REFERENCES organizations (organization_id), occupation _code VARCHAR (20) REFERENCES occupations (occupation_code), start_date DATE, end_date DATE);
- (deconstructed) appraisal indicators
  - appraisal_indivators (appraisal_id UUID PRIMARY KEY, employment_id UUID REFERENCES employment_records (employment_id), indicator_id REFERENCES skill_indicators (skill_indicator_id, proficiency_level INT, validation_source VARCHAR (100), evidence_description TEXT, recorded_at TIMESTAMP);

Presented with xmind