**MONGODB\_DATA\_MODELING**

**Project Title:** Personal Portfolio

**Objective:** To design an efficient MongoDB schema for a personal portfolio website that includes information about skills, education, projects, and contact queries.

**Collections and Structure:**

1. **skills**
   * Fields:
     + name (string)
     + level (string)
     + yearsOfExperience (number)
   * **Design Choice:** Separate collection.
   * **Reason:** Skills are independent entities with repeated structure.
2. **education**
   * Fields:
     + institution (string)
     + degree (string)
     + gpa (number)
   * **Design Choice:** Separate collection.
   * **Reason:** Each education entry contains multiple attributes and can be queried separately.
3. **projects**
   * Fields:
     + title (string)
     + description (string)
     + technologies (array of strings)
     + githubUrl (string)
   * **Design Choice:** Separate collection.
   * **Reason:** Projects vary widely and contain rich information, requiring flexibility.
4. **contacts**
   * Fields:
     + name (string)
     + email (string)
   * **Design Choice:** Separate collection.
   * **Reason:** Each message is an independent document.

**Schema Relationship Type:** - All collections are designed as **independent** collections with **no embedding or referencing**, considering the nature of a portfolio (static and read-heavy).

**Justification:** - Easy scalability and readability. - Queries are simple and focused per collection. - Easier to manage and update individual components.

**Tools Used:** - MongoDB Atlas for database setup - MongoDB Compass for modeling and querying - JSON files for document storage