**Final Project - Data Import**

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**Database Architecture**

**Client/Server Architecture: This project would require a 3-tier architecture since a user will interact with a system that retrieves and presents data from database.**

Front-end - React

1. **Client Side:** This would be side with which our end-user would interact. It would be initially a web-application. The Front-end will be designed using React

Back**-**end – Ruby on rails or Django(Python)

1. **Server Side:** The server side is responsible for processing requests, managing databases, and handling business logic.
2. **Database:** The ERD tables (User, Musician Profile, Job Application, Employer Profile, Job Listing, Messages) would be stored and managed on the server-side database. We would likely use a database management system (DBMS) like MySQL, PostgreSQL, or a NoSQL database like MongoDB, depending on your data requirements.

**Hosting Model:**

1. **Cloud Hosting:** Cloud hosting is a popular choice for web applications because it offers scalability, reliability, and flexibility. Services like Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform (GCP), or platform-as-a-service (PaaS) providers like Heroku can be used to host the server-side components, including the web server, application server, and database server. Cloud hosting will allow scaling resources as needed
2. **Content Delivery:** If we include the feature wherein users can upload their sample work in the form of a video or audio file, then we might use a content delivery network (CDN) to serve static assets like audio files and videos to users from servers located closer to their geographical locations for faster retrieval times.

**Storage Estimation:**

**For Project (Total users 10, 8 Musicians and 2 Employers) –**

1. User Profiles - 1MB per user, 10MB Total
2. Messages - 1MB per message, 10MB Total
3. Media Files – Average 10MB per user, 100MB Total
4. Job Applications/Job Listings – 1MB per application and Listing, 20MB

Requirement – Approximately 150MB

**For Real world Implementation(1 Million users)**

1. User Profiles –  1MB per user, 1000GB Total
2. Messages - 1MB per message, 1000GB Total
3. Media Files – Average 10MB per user, 1000GB Total
4. Job Applications/Job Listings – 1MB per application and Listing, 2000GB

Requirement – Approximately 10TB

**ERD for reference**

