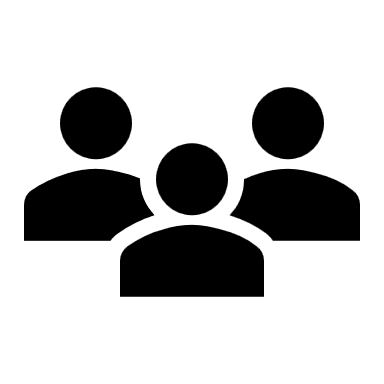
**Architecture Diagram**Admin/users/Recruiters

Amazon S3

Amazon  
Comprehend

Amazon  
RDS  
(PostgreSQL)

Step Function

API Gateway

AWS Textract

Frontend React I

AWS Lambda

AWS CloudFront

AWS CloudTrail

Amazon X-Ray

Amazon Cognito

Amazon Cognito

**Authentication**

* **Amazon Cognito** handles **MFA** and **user roles** securely.
* Role-based access for Admin/Recruiter/Viewer is achievable here.

**Frontend**

* **React Frontend** served via **Amazon CloudFront** ensures low latency and performance.
* Securely integrates with backend via **API Gateway**.

**CV Upload and Processing**

* **AWS Lambda** receives uploaded CV and triggers processing pipeline.
* **AWS Textract** extracts text from CV files (PDF, DOCX).
* **Step Functions** orchestrate the multi-step processing (extraction → classification).

**NLP and Categorization**

* **Amazon Comprehend** performs NLP tasks (e.g., skill extraction, sentiment, entity recognition).
* Ensures you meet the requirement: *“extract and categorize information”*.

**Data Storage**

* **Amazon RDS (PostgreSQL)**: Stores structured candidate info (skills, education, experience).
* **Amazon S3**: Stores raw CV files, compliant with GDPR.

**Search Capabilities**

* Though not shown explicitly, this can be extended with **Amazon OpenSearch** or **custom search queries** on RDS (skills, experience filters).

**Monitoring & Analytics**

* **AWS X-Ray** helps in tracing and debugging.
* **AWS CloudTrail** (shown but not connected) is essential for **audit logging** and **compliance** (GDPR, etc.).