

Serverless AI-Powered Business Card Organizer

● Introduction



Idea

We've built a serverless AI-powered application to streamline the process of adding leads from business cards to a datastore.



Scope

Our solution leverages OCR, NLP, and image recognition technologies to intelligently detect contact information from business cards, making it easier and more efficient for sales representatives to manage their leads.



Technology Stack

We've used Python for backend, React for frontend, AWS S3, DynamoDB, Boto3, Chalice, and various AI services like AWS Textract, Comprehend, and IAM, all working in a RESTful architecture.

● AI Enabled Business Card Organizers



A note-taking app that also has a feature for scanning and organizing business cards using OCR and saves everything into contact note.

Integrates with various third-party services, such as Google Drive, Slack, and Microsoft Teams.



A mobile app that scans and digitizes business cards using OCR and allows for easy management and organization of contacts.

CamCard supports integration with various contact management systems such as Salesforce, Google Contacts, and Microsoft Outlook Teams.



A cloud-based business card management system that uses OCR to digitize the business card and create a database of contacts.

Offer integrations with Salesforce and Microsoft Dynamics, enabling users to seamlessly transfer their contact information

● Functional Requirements

ID	Requirement
R-001	Allow the user to upload images of business cards.
R-002	Automatically detect the labels from the image.
R-003	Display the detected labels on the webpage.
R-004	Allow the user to modify the detected labels.
R-005	Automatically store the results into the database after approval from the user.
R-006	The application shall have an edit lead page to allow the user to modify the data previously stored by them.
R-007	The application shall have a sign-in page to enable the user to sign in.
R-008	Possess advanced search capabilities to search for a contact using the company's name.
R-009	The application shall have an add sign-up page to allow the admin user to add a new user.
R-010	The application shall have a leads list page to display a list of all the entries in the dataset.
R-011	The application shall have a view page to view the data.

● Private Endpoints

AWS S3
Storage Service

AWS Rekognition
Recognition Service

AWS Textract
Textract Service

AWS Comprehend
Comprehend Service

AWS Comprehend Medical
Medical Comprehend Service

AWS DynamoDB
DynamoDB Service

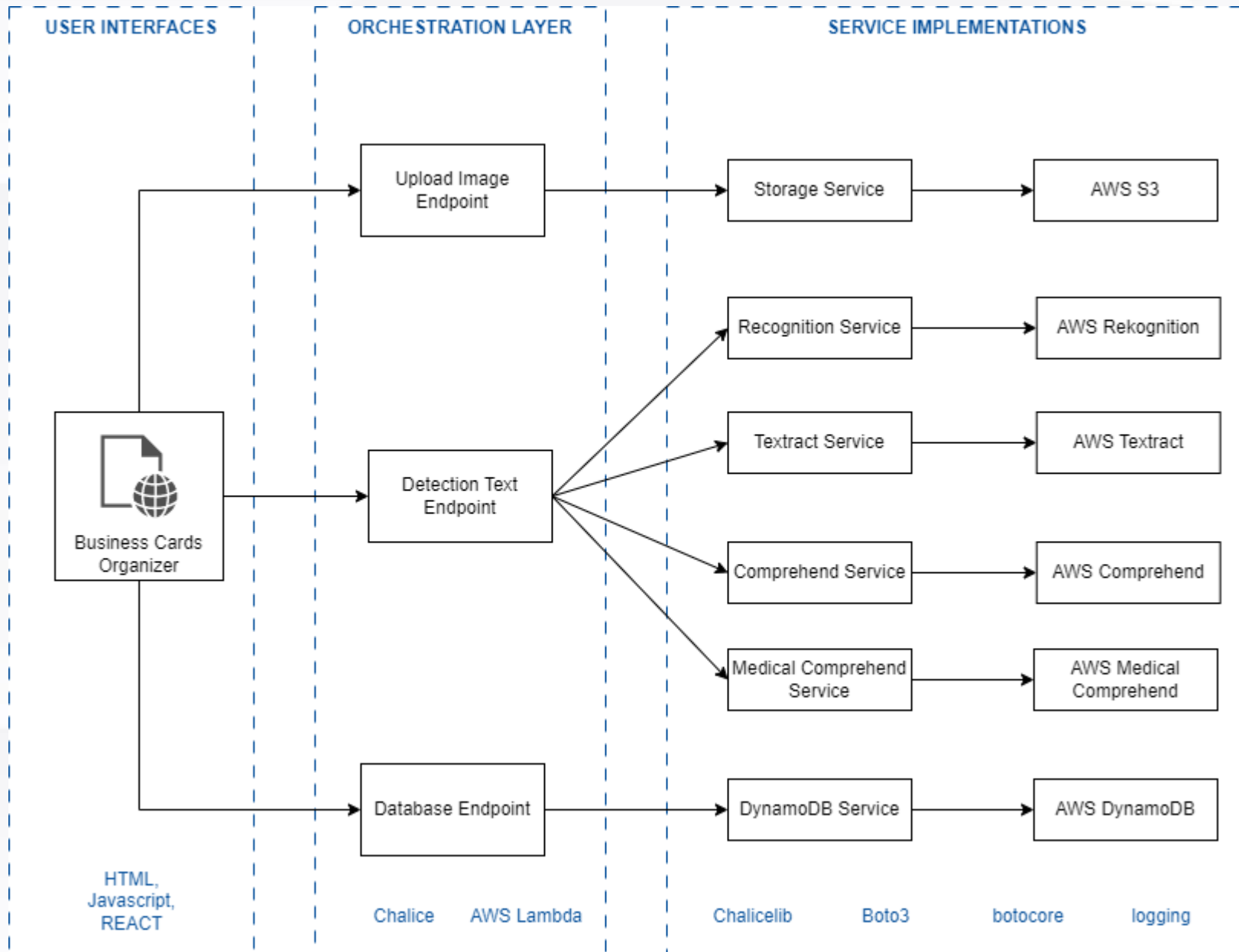
● Public Endpoints

Upload Image Endpoint

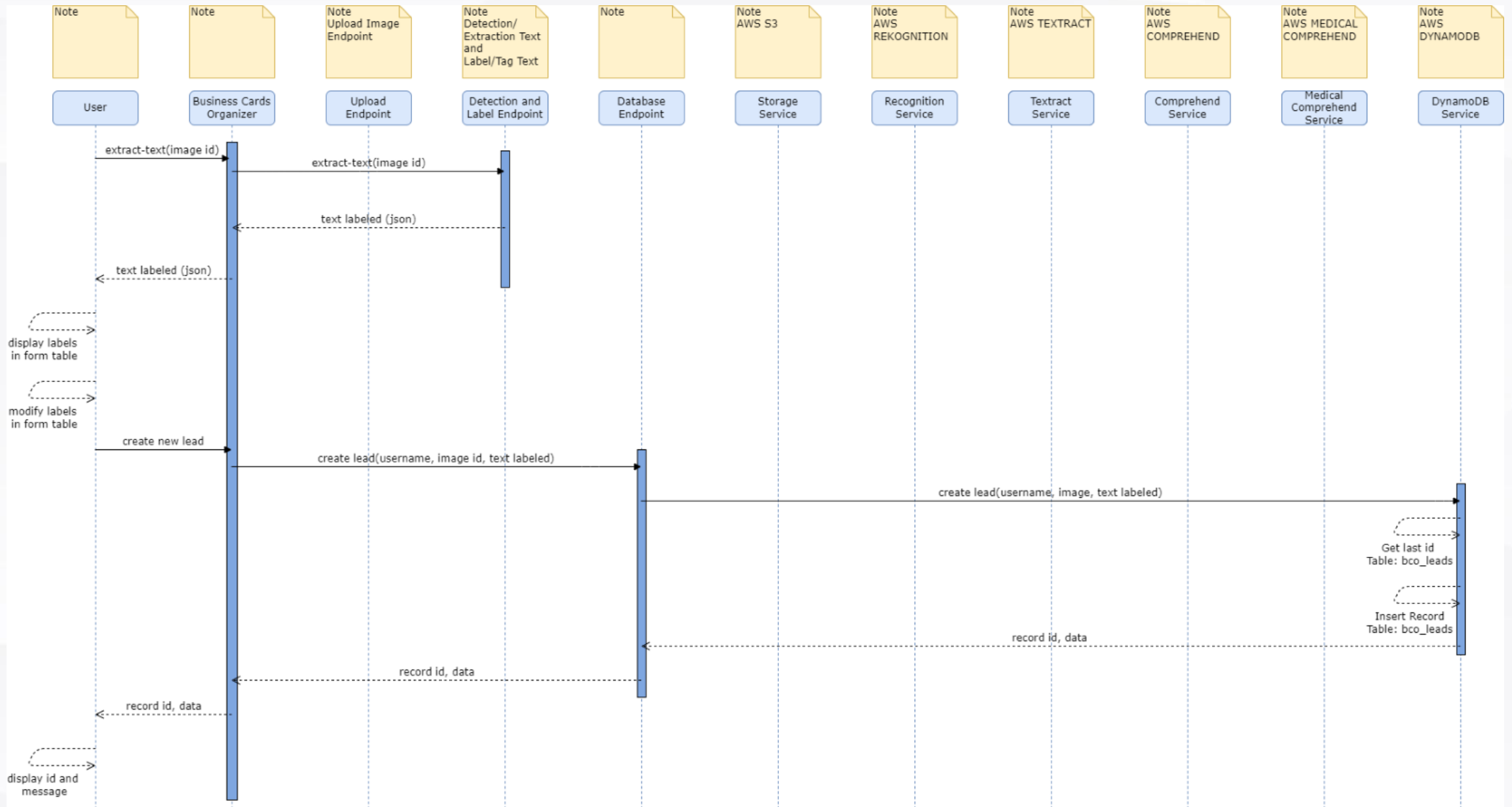
Detection Text Endpoint

Database Endpoint

Architecture Diagram



● Communication Diagram – Store DynamoDB





Home
Page
View

Home

Please log in.

Login



Login View

Home

Login :

Username :

Password :



Logged in
View

Hello, admin !

View Lead List

Add new Lead

Logout



Create Account View

Create Account

Username:

Password:

Account Type:

User ▾
User
Admin

Create Account



[Home](#)

[Leads](#)

[Add Lead](#)

[Create Account](#)

[Logout](#)

Select an image: 013.jpg

Upload

**Add Lead
View**



Select an image: 013.jpg



Company Name:

Person Name:

Company Website:

Company Address:

Email:

Phone Numbers:

Add Lead View After Uploading an Image



List of Leads

Add new Lead

Search by lead name

Leads
View

Company Name	Person Name	Company Website	Company Address	Email Address	Phone Number	Actions
One Home Insurance		www.oneinsurance.com	5432 Blackwelder CT, Palo Alto, CA 84750		555.583.5332, 555.582.5341	
A		www.website	12345 Main Street,, City, ST 00000	yourname@email.com	['123.456.7890']	
Last	Clara Emmaline	www.speedize.com		info@speedize.com	['613 406 3467']	
REALTOR®		www.website	12345 Main Street,, City, ST 00000	yourname@email.com	['123.456.7890']	
REALTOR®		www.website	12345 Main Street,, City, ST 00000	yourname@email.com	['123.456.7890']	
Speedize	Clara Emmaline	www.speedize.com		info@speedize.com	['613 406 3467']	
REALTOR®		www.website	12345 Main Street,, City, ST 00000	yourname@email.com	['123.456.7890']	
Saathiva	Kartikey Karoth			kartik@saathiva.com	+41 (0) 79 821 20 01	



Edit Lead View

[Home](#)

[Leads](#)

[Add Lead](#)

[Create Account](#)

[Logout](#)

Edit Lead

Company Name:

Fabrikam, Inc

Person Name:

Samantha Smith

Company Website:

www.fabrikam.com

Company Address:

1234 Main Street - Portland

Email:

Insert Email

Phone Numbers:

Phone (770) 555-0100, Fax

Image:



Update Lead



Retrieval Lead View by Lead Name

[Home](#)

[Leads](#)

[Add Lead](#)




[Create Account](#)

[Logout](#)

List of Leads

Add new Lead

Fabrikam, Inc

Company Name	Person Name	Company Website	Company Address	Email Address	Phone Number	Actions
Fabrikam, Inc	Samantha Smith	www.fabrikam.com	1234 Main Street - Portland		Phone (770) 555-0100, Fax (770) 555-0101	  



Quick
Lead
View

List of Leads

Add new Lead

Company Name	Person Name	Company Website	Phone Number	Actions
Fabrikam, Inc	Samantha Smith	www.fabrikam.com	Phone (770) 555-0100, Fax (770) 555-0101	

Fabrikam, Inc
Samantha Smith
www.fabrikam.com
1234 Main Street - Portland
Phone (770) 555-0100, Fax (770) 555-0101

[More Details](#)



More Detailed Lead View

View Lead

Company Name:	Fabrikam, Inc
Person Name:	Samantha Smith
Company Website:	www.fabrikam.com
Company Address:	1234 Main Street - Portland
Email:	
Phone Numbers:	Phone (770) 555-0100, Fax

Image:



● Conclusion



We built an application using Amazon Web Services that was capable of extracting contact information from business cards. The application is also capable of storing contact information. The application was created to allow salespeople who collect many business cards to turn their business cards into digital catalogs of contacts effortlessly. Remarkably, job seekers can also use this application to keep track of all the people they meet in professional settings.

Our application relies on several online applications. The front end of our application was built using the React front-end JavaScript library. Meanwhile, the back end of our application takes advantage of the Node JavaScript runtime environment. Our application's back end is also connected to Amazon web services that include S3 for storage, Rekognition for recognition, Textract for extracting text, Comprehend and Medical Comprehend for interpreting text, and DynamoDB for data storage. Additionally, the coding languages used in our application include JSX, which is an extension of the JavaScript language, CSS (or cascading style sheets), and Python.