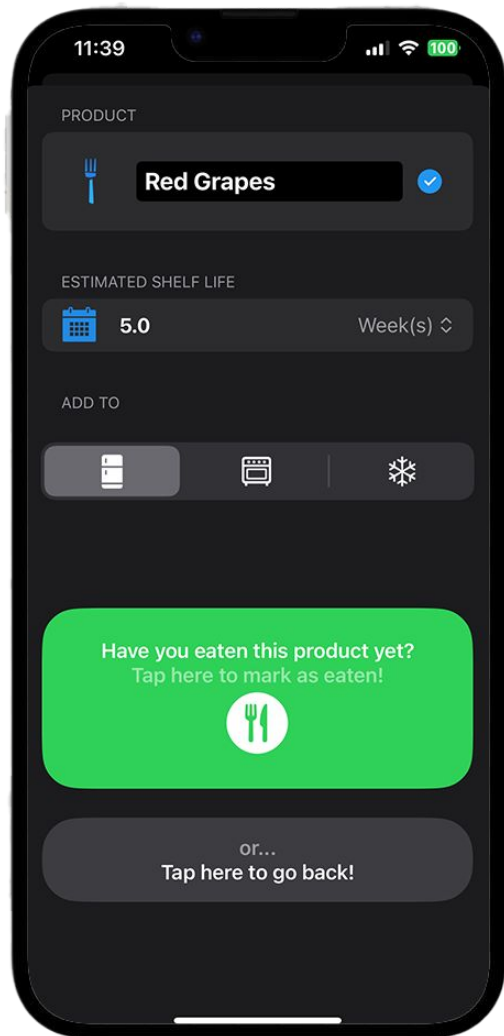


# PRESERVE

reduce food waste at home

Presentation By Tyler Chang & Simay Cural



# The Problem

**32%**

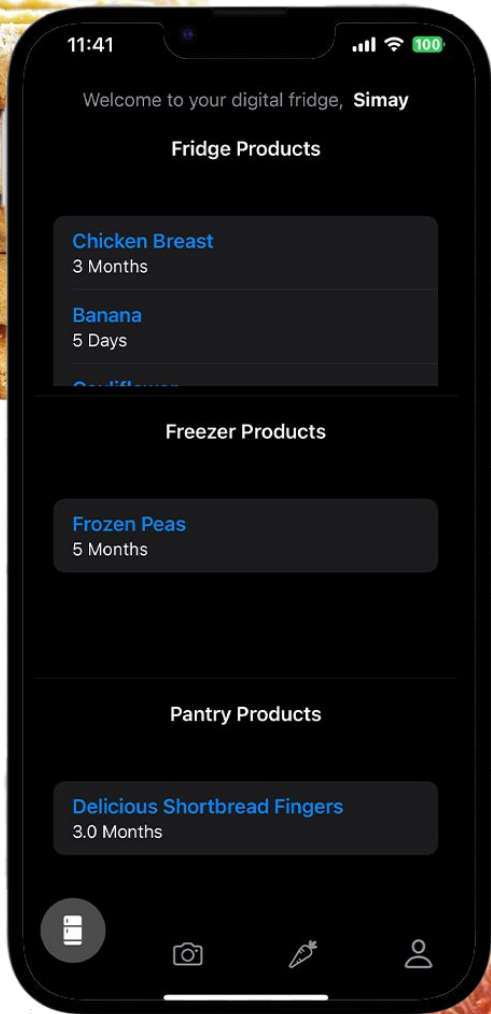
of purchased foods  
wasted by typical US  
household

**35,000,000**

people suffer from food  
insecurity in the US

**\$1600**

worth of food waste for  
a typical family of four



# Motive

‘Best by’ vs. ‘expires on’ or ‘use by’

Throwing produce away for precautionary reasons

Forgetting about the product

Our project, Preserve, aims to prohibit this large scale issue by targeting small scale users, i.e. household inventories.



# Solutions



## Expiration Dates

Each item is assigned an estimated shelf life based on a dataset from the USDA, which reminds users upcoming expiration dates.



## Using What's Present

Preserve recommends recipes based on what is present in the users' inventory, promoting the use of what is already available.

## Mindful Shopping

By knowing what is already present in their inventory, users can prohibit the possibility of excess purchases.



# Technologies

## iOS Application



## Backend Resources



python™

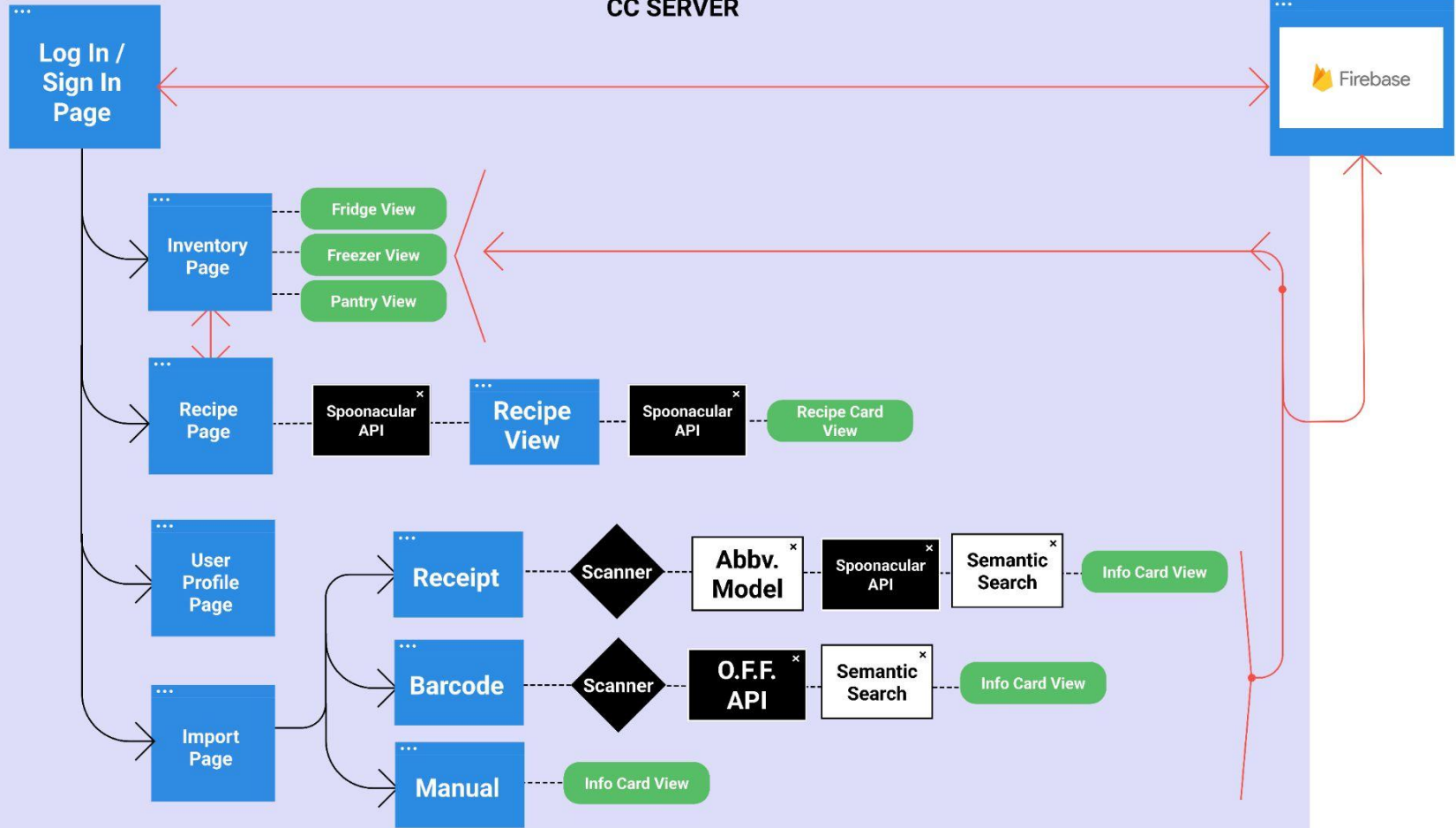
- Large Language Model Processing



Firebase

- Authentication
- Database Storage

# CC SERVER



# USDA Data Preview

Over  
**6.000**  
food  
items

Fridge,  
Pantry,  
Freezer  
food life

Keywords  
such as:  
Ground,  
Smoked,  
Shelled,  
Pasteurized,  
Full-fat,  
Breaded

...

Need a  
quick  
way to  
parse  
items

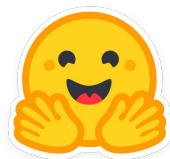
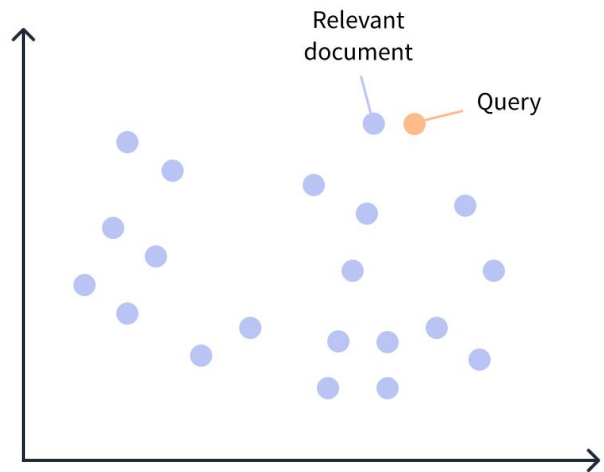
Name	Name_subtitle	Keywords	DOP_Refrigerate_Max	DOP_Refrigerate_Metric
Butter		Butter	2	Months
Buttermilk		Buttermilk	2	Weeks
Cheese	hard such as cheddar, swiss, block parmesan	Cheese,cheddar, swiss,parmesan	6	Months
Cheese	parmesan; shredded or grated	Cheese,parmesan,shredded,grated	12	Months
Cheese	shredded; cheddar, mozzarella, etc.	Cheese,shredded,cheddar,mozzarella	1	Months
Cheese	processed slices	Cheese,processed slices,slices,slice	4	Weeks
Cheese	soft such as brie, bel paese, goat	Cheese,brie, bel paese, goat	2	Weeks
Coffee creamer	liquid refrigerated	Coffee creamer,Coffee, creamer,liquid refrigerated	3	Weeks
Cottage cheese		Cottage cheese,cheese	2	Weeks
Cream cheese	whipping, ultrapasteurized	Cream cheese	2	Weeks
Cream		Cream,whipping,ultrapasteurized	1	Months
Cream	half and half	Cream,half	4	Days
Cream	heavy	Cream,heavy	10	Days
Cream	light	Cream,light	1	Weeks
Dips	sour cream based	Dips,sour cream based,sour,cream based,cream,dip	2	Weeks
Egg substitutes	liquid	Egg substitutes,liquid,egg,substitutes,substitute	7	Days
Eggnog	commercial	Eggnog,commercial,egg,nog	5	Days
Eggs	in shell	Eggs,in shell,egg,shell	5	Weeks
Kefir	fermented milk	Kefir,fermented milk,milk,fermented	1	Weeks
Margarine		Margarine	6	Months
Whipped cream	aerosol can	Whipped cream,cream,aerosol can,can	4	Weeks
Whipped topping	aerosol can	Whipped topping,topping,aerosol can,can,whipped	3	Months
Whipped topping	tub	Whipped topping,topping,tub,whipped	2	Weeks
Yogurt		Yogurt	2	Weeks
Beef	rib roast, bone-in	Beef,rib roast,bone-in,roast,bone,rib	5	Days
Beef	rib roast; boneless, rolled	Beef,rib roast,boneless,rolled,roast,rib	5	Days
Beef	round or rump roast	Beef,round,rump roast,roast	5	Days
Beef	tenderloin, whole	Beef,tenderloin,whole	5	Days
Beef	tenderloin, half	Beef,tenderloin,half	5	Days
Beef	chuck roast, brisket	Beef,chuck roast,roast,brisket	5	Days
Beef	steaks	Beef,steaks,steak	5	Days
Beef	stew, cubes	Beef,stew, cubes,cube	5	Days
Beef	short ribs	Beef,short ribs,ribs,rib	5	Days
Beef	ground	Beef,ground	2	Days
Lamb	leg, bone in, small	Lamb,leg bone in, small bone in,bone	5	Days



# Semantic Search

“Chobani Strawberry Greek Yogurt” ==> “Yogurt”

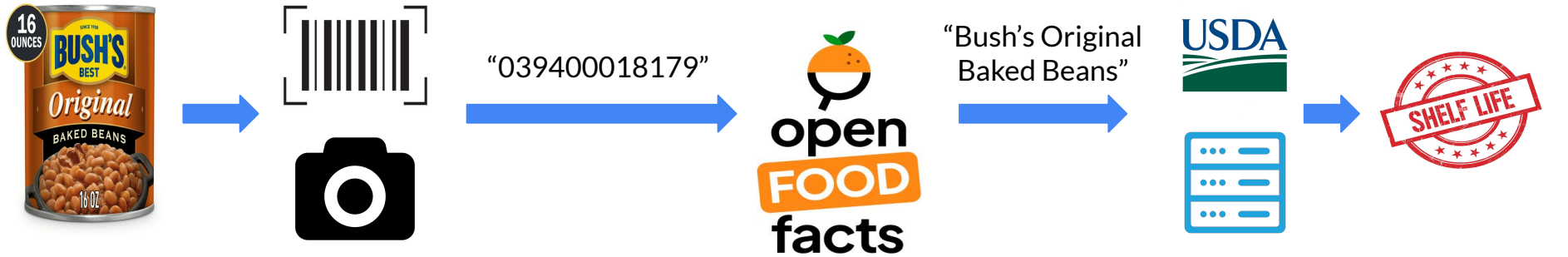
“Tillamook Dark Chocolate Ice Cream” ==> “Ice Cream”



**Hugging Face**



# OpenFoodFacts API / Barcode Scanning

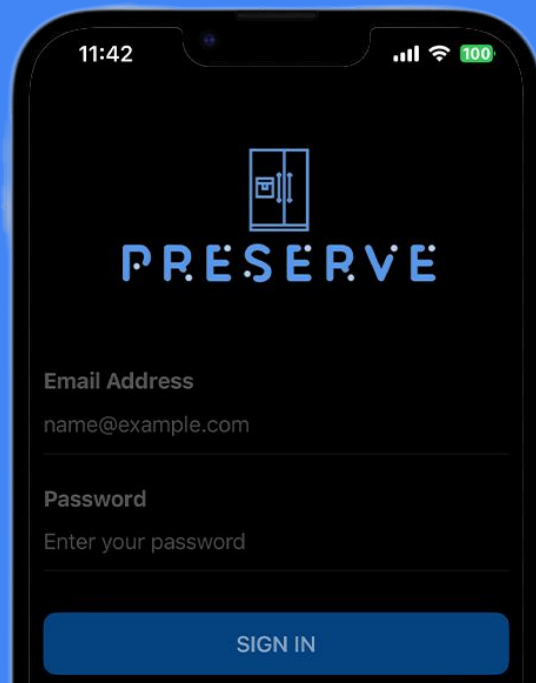


3,000,000+  
products

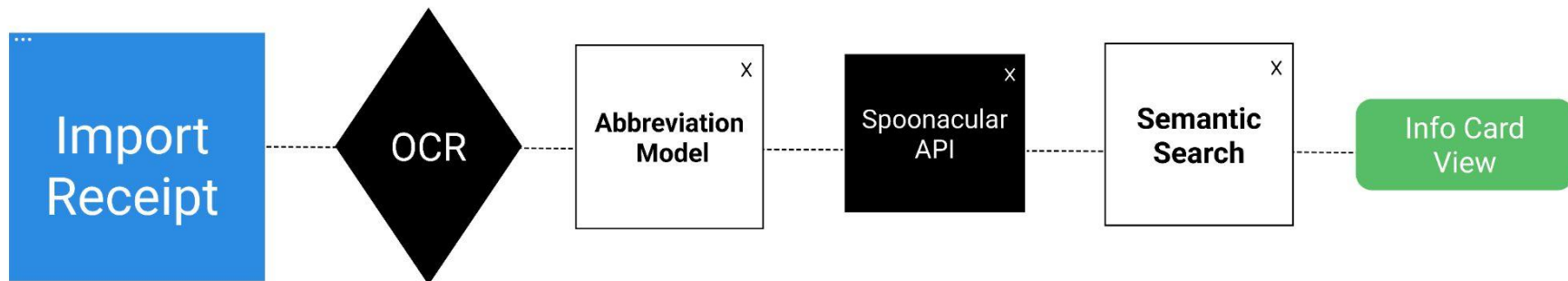
150  
countries



# Application Demo



# Receipt Importation



THANK YOU  
THANK YOU  
**THANK YOU**  
THANK YOU  
THANK YOU  
THANK YOU

**Have A Nice Day**

**PLEASE RETURN TO A PARTICIPATING STORE FOR RECYCLING**

\*Programs may not exist in your area

Q&A