



LetsEat

FINAL PRESENTATION

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THE ISSUE

"I don't care, I just don't want Italian food."

"It's so difficult for everyone to agree on a restaurant."

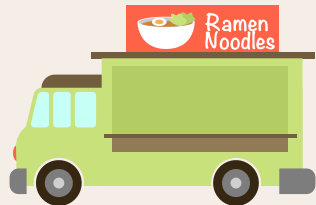


"We can't figure out where to eat, it is too hard to decide."

"There's too many options on Yelp and Google."

THE SOLUTION

LetsEat is a restaurant recommendation application that utilizes machine learning to quickly generate a single personalized recommendation based on your input



WE MAKE
THE
DECISION
FOR YOU!

Discover your
new favorite
restaurants.

[Discover Now >](#)



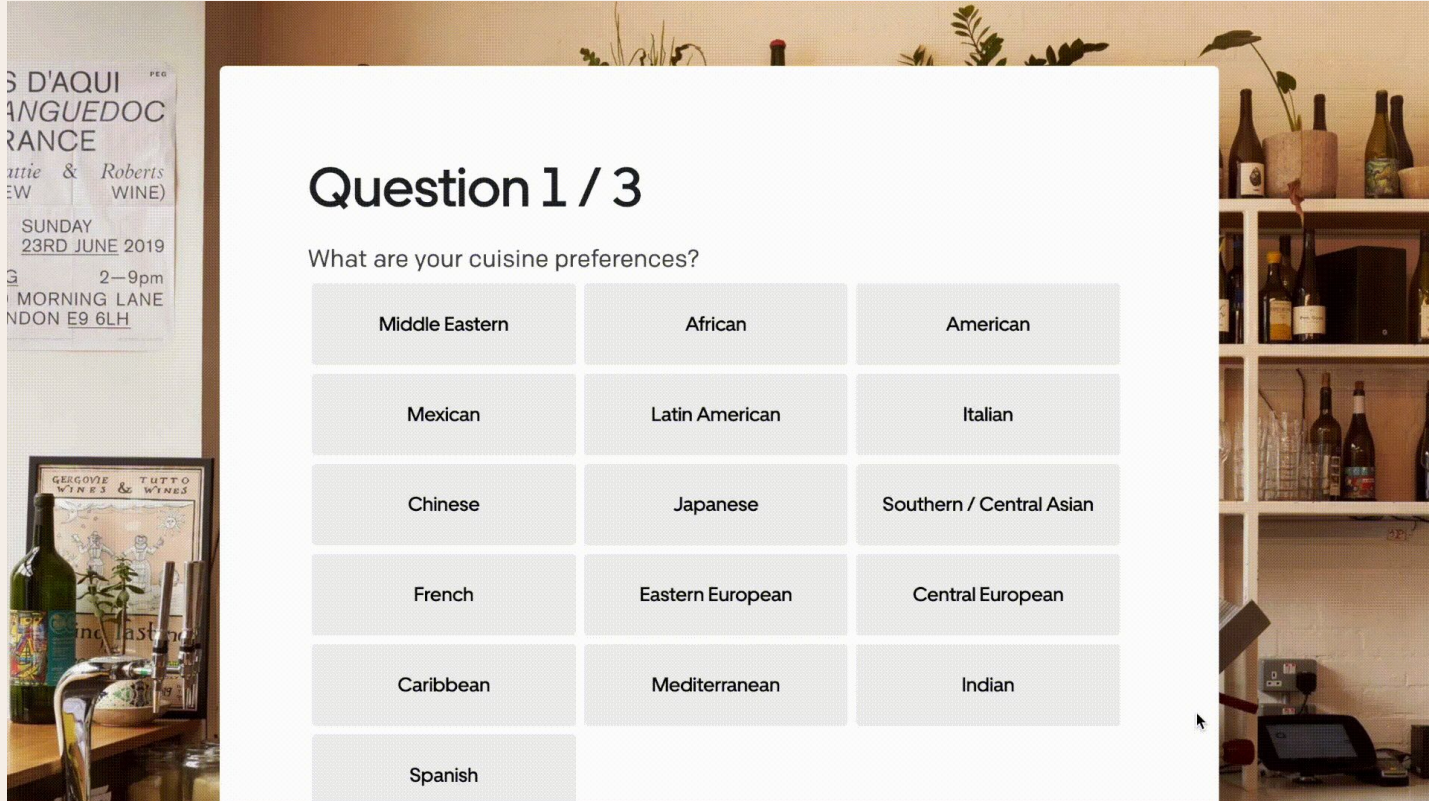
“LetsEat provides personalized restaurant recommendations using a unique machine learning algorithm”

We match your preferences and restrictions to restaurants for you

Free to use platform that saves you time deciding on



Create a New Profile



Search

LetsEat

Dashboard

Group

Profile

Sign Out

Begin your search for restaurants near you

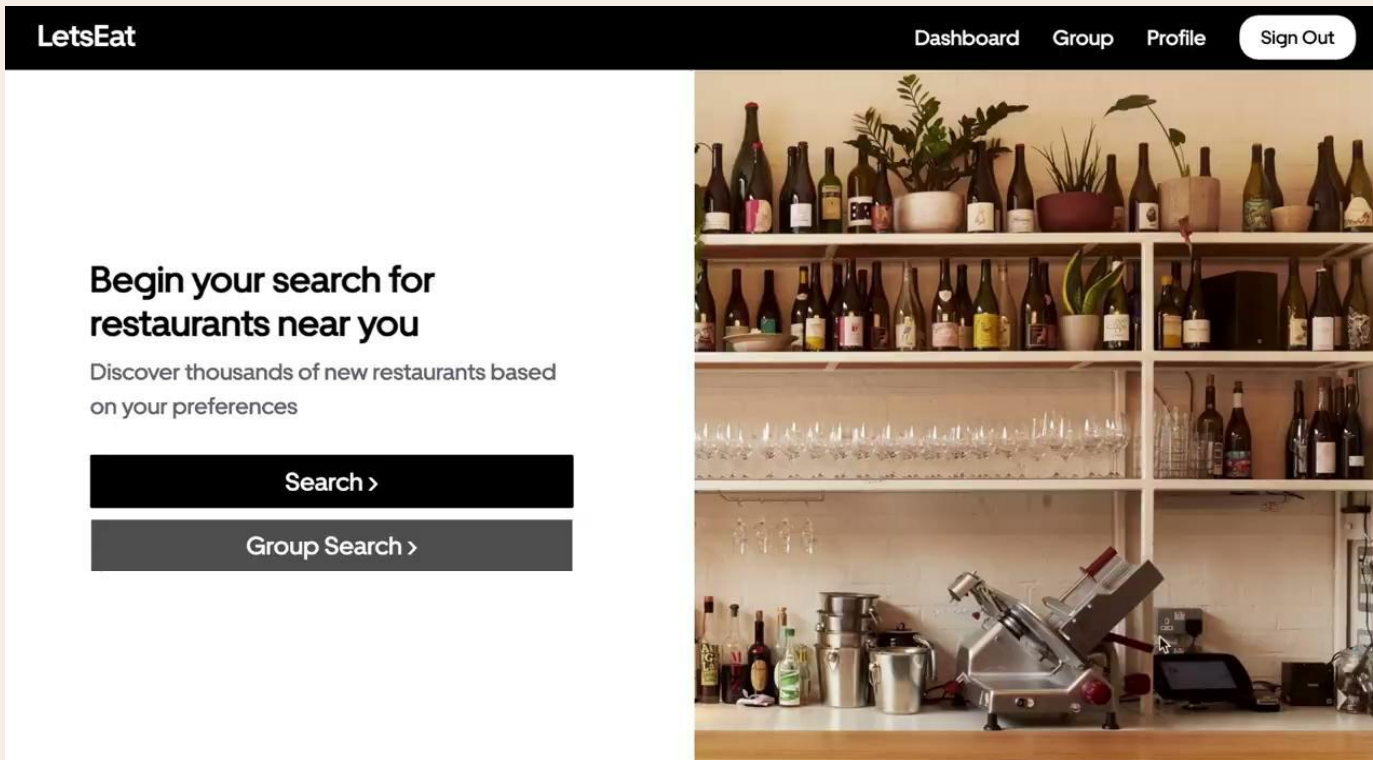
Discover thousands of new restaurants based
on your preferences

Search >

Group Search >



Group Search



The screenshot shows the LetsEat website interface. At the top, there is a black navigation bar with the LetsEat logo on the left and links for Dashboard, Group, Profile, and a Sign Out button on the right. The main content area is split into two columns. The left column has a white background and contains the text "Begin your search for restaurants near you" in bold, followed by "Discover thousands of new restaurants based on your preferences". Below this text are two buttons: a black button with "Search >" and a grey button with "Group Search >". The right column features a photograph of a well-stocked bar with shelves of bottles, glasses, and a slicer on the counter.

LetsEat

Dashboard Group Profile Sign Out

Begin your search for restaurants near you

Discover thousands of new restaurants based on your preferences

Search >

Group Search >



How Do We Generate Recommendations?

Machine Learning!

But how does our machine learning algorithm learn what recommendations to give?



01

Where / How Are We Getting the Data?

BACKEND



Yelp Fusion API


- Restaurant Name
- Restaurant Location
- Restaurant Price Range
- Restaurant Cuisine Type
- Restaurant Hours



Stored in MySQL

Web Scraping Algorithm

Selenium Webdriver

- Scrapes restaurant webpages and reviews
- Sentiment Analysis on Reviews
- Offload to AWS Lambda 



Good for
Dinner,
Classy

good time,
date night,
friends





02

How is the Data Used to Make Recommendations?

BACKEND

The Answer: Machine Learning

User and Restaurant Data

Takes user answers and restaurant features



Matches the users and restaurants



Delivers recommendation based on model training

Algorithm Learns Based on User Activity

*Collaborative
Filtering*



Recommendation Process



Recommendation Accuracy

Accuracy



91.7%

Precision



92.4%

Recall



99.1%

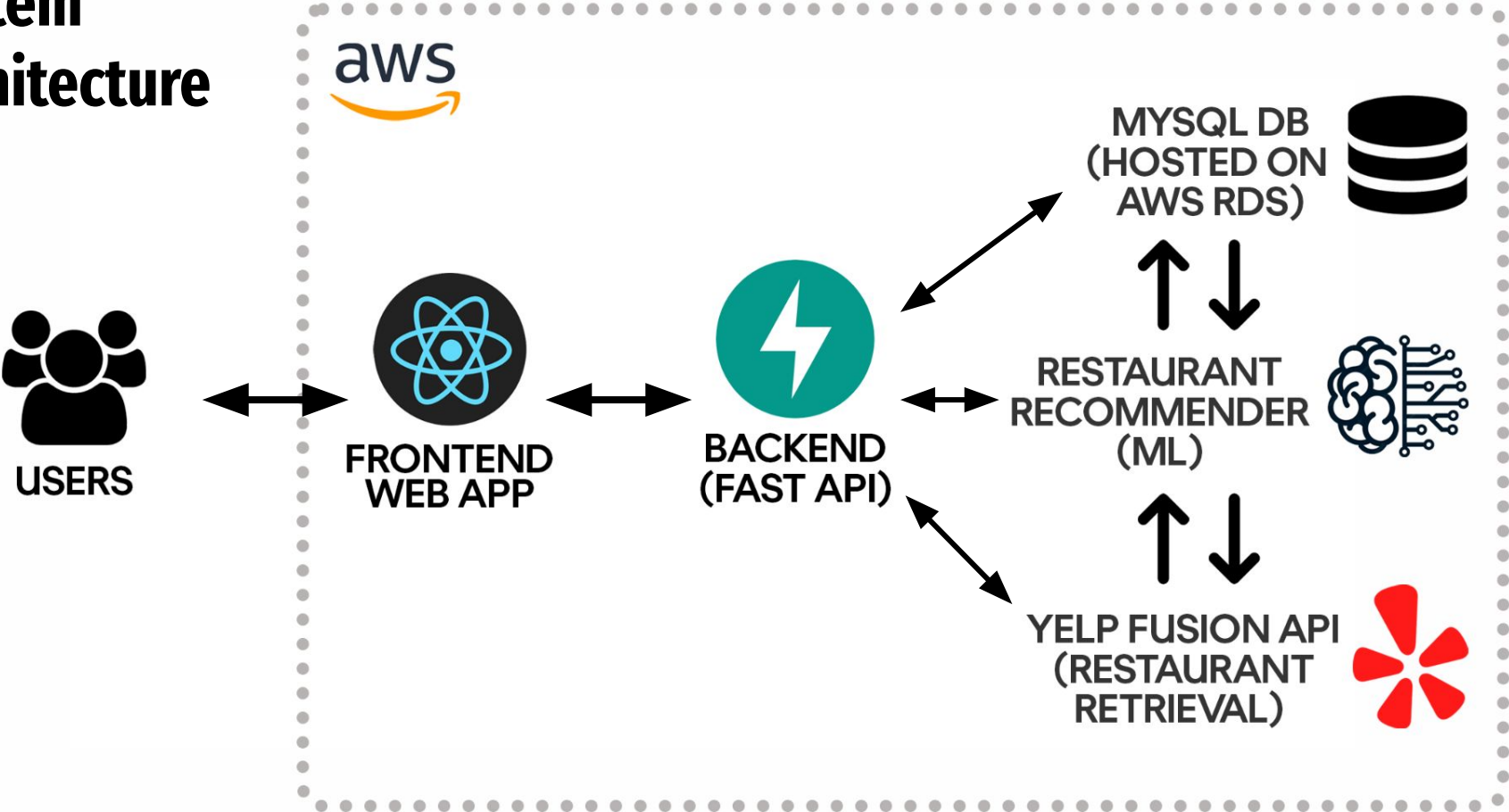


03

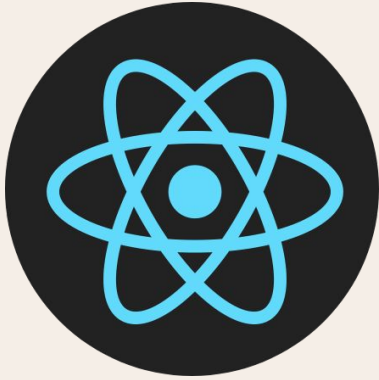
PUTTING IT TOGETHER

FRONTEND & BACKEND

System Architecture



FRONTEND LIBRARIES



REACT



BOOTSTRAP



CSS

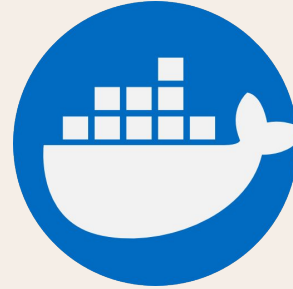
BACKEND LIBRARIES



FastAPI



MySQL



Docker



EC2/RDS

Use LetsEat!

LetsEat

Dashboard

Group

Profile

Sign Out

Begin your search for restaurants near you

Discover thousands of new restaurants based
on your preferences

Search >

Group Search >



THANKS!

Do you have any questions?

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<https://menglander2019.github.io/LetsEat-Dev/website/index.html>

