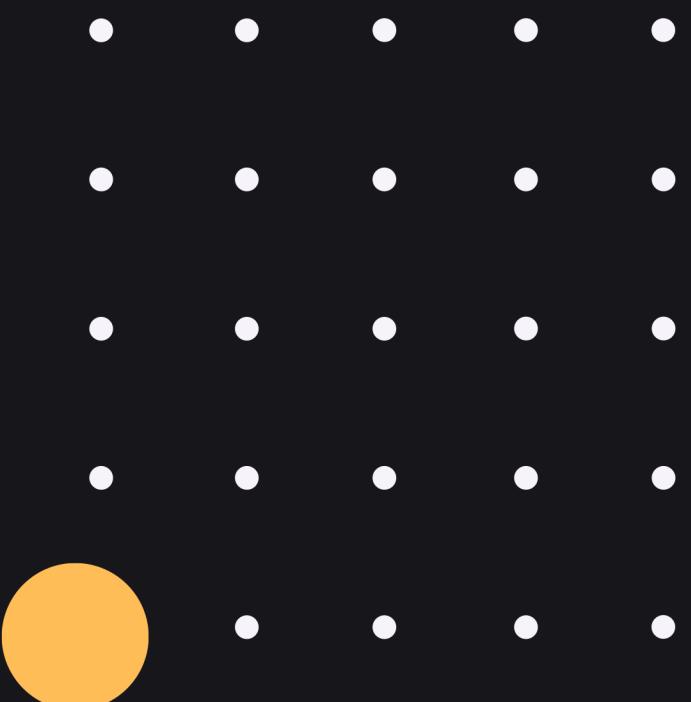




DATUM TECH

Data Analytics y Machine Learning

Soluciones analíticas e innovadoras para el futuro





Contenido

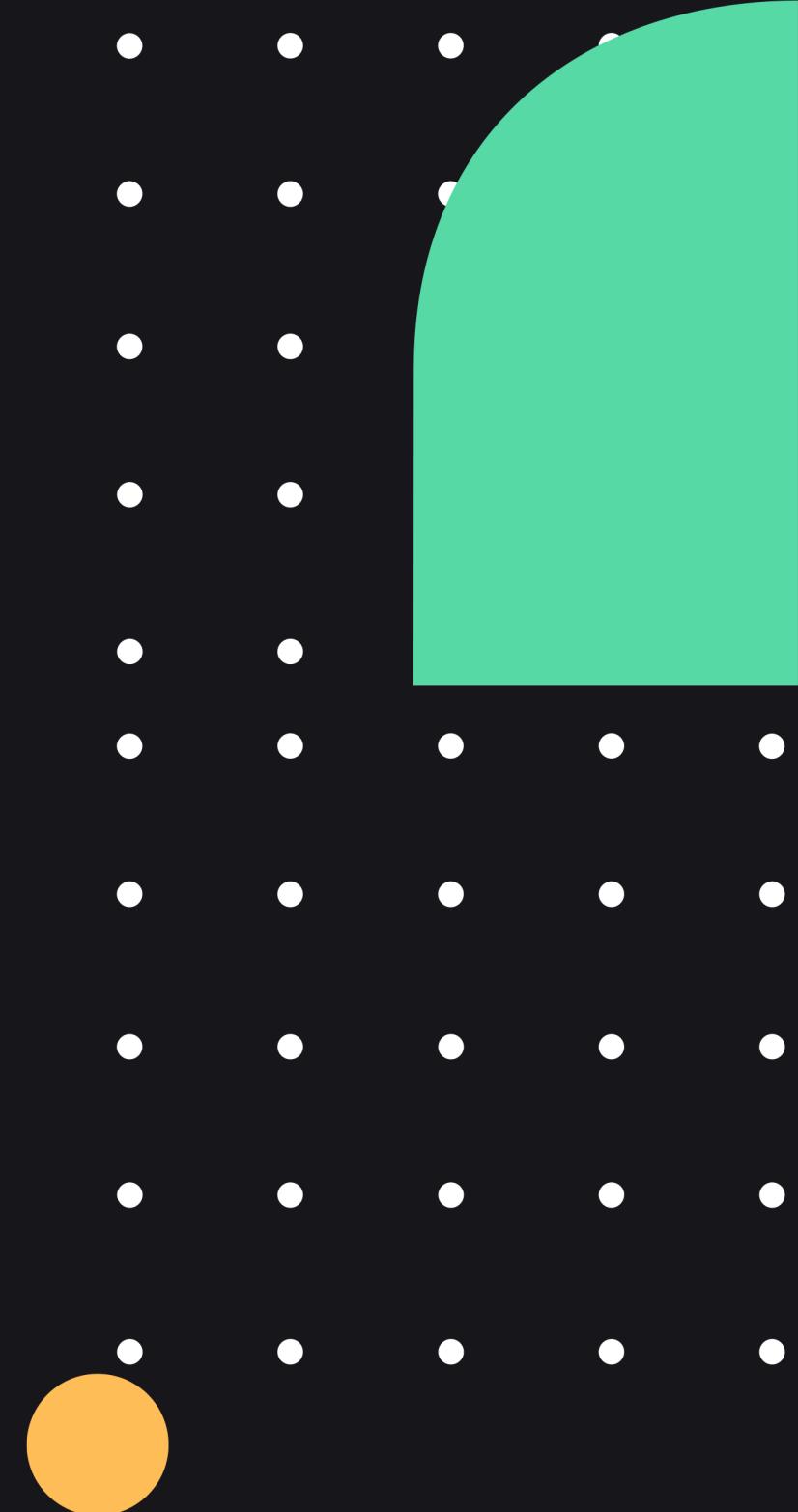
- **Objetivos**
- **Stack Tecnologico**
- **Modelo de recomendaciones**
- **Dashboard**
- **Propuestas finales**





Objetivos

- **Evaluar las emociones y opiniones de los usuarios.**
- **Crear un sistema de recomendación.**

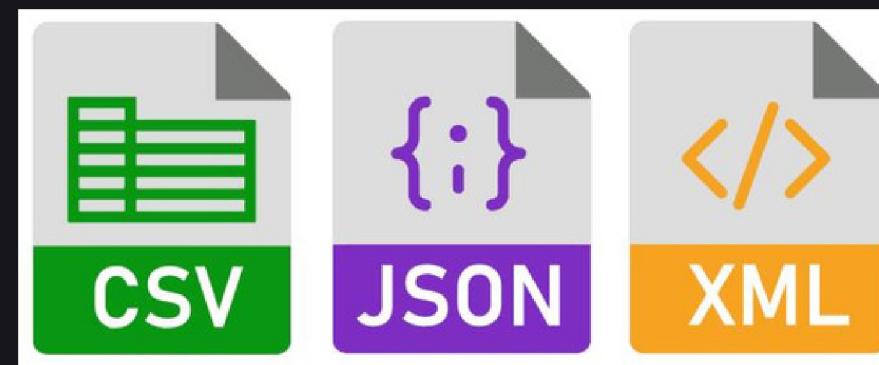




Cambios en el stack tecnologico



Stack Tecnologico



MACHINE LEARNING



Power BI





Modelo de recomendaciones

- **Recomendaciones que, buscan y encuentran los mejores locales, basado en el Estado y las características que el usuario desea.**
- **1) Modelo que emplea la similitud del coseno para recomendaciones más precisas y satisfactorias.**
- **2) Modelo k-vecinos más cercanos, para encontrar los lugares más cercanos a una ubicación dada en función de latitud y longitud, además se emplea un análisis de sentimientos.**



Modelo aplicado

Name	Description
state	CA
categoria	Pub, restaurant

```
{
  "name": "Ball & Chain",
  "address": "Ball & Chain, 1643 N Cahuenga Blvd, Los Angeles, CA 90028",
  "avg_rating": 4.2,
  "categories": "Gastropub, Restaurant",
  "attributes": "https://www.google.com/maps/place//data=!4m2!3m1!1s0x80c2bf3bc691e533:0x59995def574a948d?authuser=-1&hl=en&gl=us",
},
{
  "name": "Porter's House",
  "address": "Porter's House, 20209 Rinaldi St, Porter Ranch, CA 91326",
  "avg_rating": 4.4,
  "categories": "Pub, Restaurant",
  "attributes": "https://www.google.com/maps/place//data=!4m2!3m1!1s0x80c28576c1531ac5:0x2da2a7b00c7fdb52?authuser=-1&hl=en&gl=us"
},
```

Name	Description
state	AZ
categoria	Italian

```
{
  "name": "Fresco Italian Cafe on the Canal",
  "address": "340 W Michigan St",
  "avg_rating": 4.5,
  "categories": "Italian, Beer Bar, Bars, American (New), Nightlife, Wine Bars, Cafes, Restaurants",
  "attributes": "BikeParking, BusinessAcceptsCreditCards, Caters, DogsAllowed, GoodForKids, OutdoorSeating, RestaurantsDelivery, RestaurantsGoodForGroups, RestaurantsTakeOut, WheelchairAccessible",
  "Sentimiento": "positivo"
},
{
  "name": "Diavola Pizza",
  "address": "1134 E 54th St, Ste I",
  "avg_rating": 4.5,
  "categories": "Italian, Restaurants, Pizza, Bars, Nightlife, Wine Bars, Beer, Wine & Spirits, Food",
  "attributes": "BikeParking, BusinessAcceptsCreditCards, Caters, DogsAllowed, GoodForKids, HappyHour, HasTV, OutdoorSeating, RestaurantsDelivery, RestaurantsGoodForGroups, RestaurantsReservations, RestaurantsTableService, RestaurantsTakeOut, WheelchairAccessible",
  "Sentimiento": "positivo"
}.
```



Análisis de sentimientos - NLTK (Natural Language Toolkit)

text	Puntaje de sentimiento	Sentimiento
mixed feelings place. pros- great location. really heart everything. close attractions french quarter. history. many famous people stayed here. price great! sheets soft. saltwater pool amazing spoiled normal pools. staff friendly. cons- wifi bathroom light worked portion time. everything older outdated (carpet, tile, balcony, bedspread, elevator). ice box lower level. coffee makers refrigerators rooms.	0.9523	positivo
tied best indian philly. delivery mess (containers broken open, food cold) may restaurant's fault. tough say. solid 3-star now.	-0.4588	negativo
manager friendly. staff seems run well there. food fresh, fries, potato cakes hot. food takes minutes asks us seat someone brings food table. never issue here. tend hit grocery shopping buy lot junk store.	0.765	positivo
must try!! order take rate servers always positive experience. place usually busy go food always hot pick up, someone always greets soon walk place clean welcoming. personally love drunken noodle dish get shrimp beef good portion size make 2 meals plus! husband gets chicken satay coconut rice loves it. definitely recommend place!!	0.9798	positivo
first glance restaurant seems italian restaurant. careful. menu lot items relationship italian cuisine. white table cloths also lend certain ethnic identity. restaurant food menu ole ole. quick note continue, tommy's warehouse district anyone else. setting gorgeous maintains characteristics buildings area. design decoration help relaxing step above. food truly star. never bad dish specific parts menu truly unique. always looked louisiana restaurant first. ordered turtle soup beet salad along linguini. food service fantastic. third time eaten perfect time.	0.9809	positivo



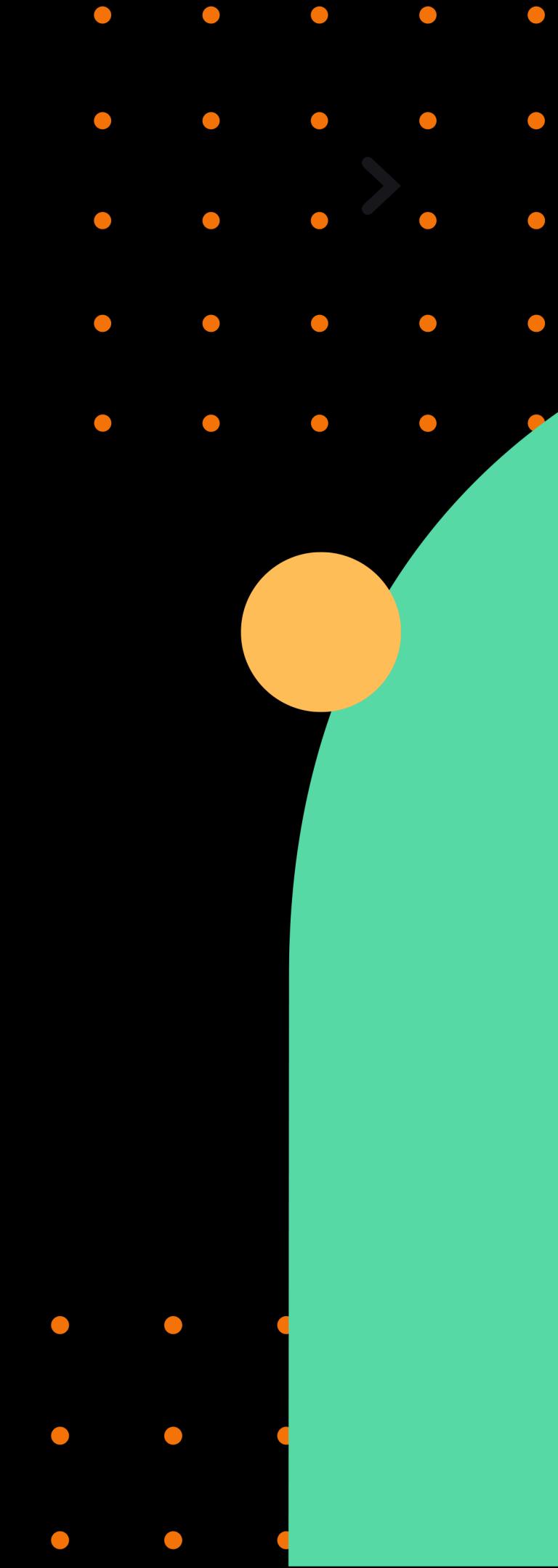
Análisis de sentimientos - BERT (Bidirectional Encoder Representations from Transformers)

cardiffnlp/twitter-xlm-roberta-base-sentiment

text	Sentimiento
first, review market, dining room, order go. advice love place, place go order here. eating pretty regularly never tried order take recent visit. one people group needed get home quickly planning maynard's figured stick it. never considered market carryout certainly trying difficult. mistake trying jerk asking service offered, really know. guess market seemed like carryout friendly menu. anyway, issue way lady behind counter handled situation. handled polite, carryout. however, really rude clearly irritated. seriously need that. went menu intended carryout proper take containers. ok, get carryout. really, brought home leftovers plenty times consider proper containers necessary make reasons annoyed asked carryout. tell something offer come back next time dine in. vibe place usually fun; sad ordering listening people order. pretty short guy ordered us too. dining questions menu; possibly still irritated order. good experience. love guessing back. lesson learned, dine only. see person behind counter heading across street congress ended afternoon.	Negativo
place amazing.. relaxing daughter loved made friends enjoyed view... good food.	Positivo
prosciutto burger more. told good sale. fried mushroom delicious fried pickles salty. however, agree burgers taste average high dollar. \$13 probably worth \$7-8. much better burgers around lower price. worst thing added tips bill. two parties 7 people together. added 20% ask additional tip. normally tip, (easier calculate 18%), like forced appreciate service! felt slightly insulted!	Negativo
great fusion food! wouldn't necessarily categorize place modern vietnamese bistro bistro asian twist. beef steak eggs good much beef make meal. chicken green waffles good waffles heavy. chicken good sauce waffles made dish. pho good great good. kimchi burger great fries fantastic. worth effort come dinner.	Positivo
yes, pancakes good! still, never stand line breakfast food. mean "break fast," super hungry. hungry, want food right away whine starving. boyfriend reminds me, "you're starving. people rwanda starving. hungry." true. still, warned someone born raised nashville must get 7:30 a.m., did. three party four vacation one working. turn seated, working one take call went outside yet rest us walked table. none crappy policy waiting entire party ready seated -- policy common busy dc restaurants. sat drooled menu friend finished business outside. phone call, mean. pooping outside. waited, waited, server, kept checking us topping coffee patiently waited friend join us ordering. imagine that, rushed getting 'tude busy staff! food came -- sweet potato, commeal, caribbean, regular potato pancakes shared enjoyed table. sweet potato pancakes came sort creamy cinnamon syrup, drank dispenser. pancakes heavenly, light, fluffy, good were, served vehicle wonderful sauce/syrup! hype. really good, get early!	Negativo



DASHBOARD





Propuestas Finales

- Creación de interfaz grafica interactiva para consumo de la api con los modelos de machine learning.
- Planteo de estrategias en base al análisis de los KPIs propuestos.

**Muchas
GRACIAS!**

