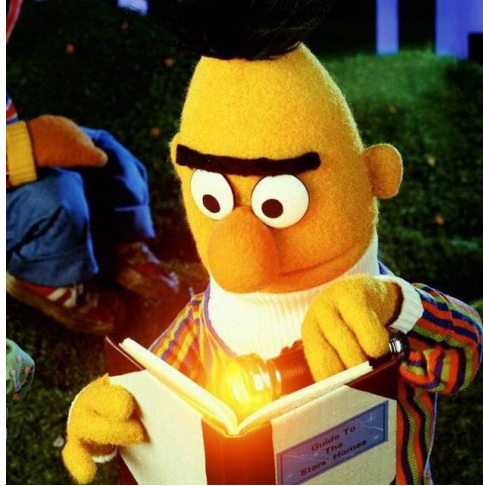


Similar products model and its' applications

About me



- Bachelor's degree in applied mathematics and computer science
- Cloud storage → eCommerce
- Search @ Joom

International group

of e-commerce and fintech companies

Joom Marketplace

platform for shopping
from all over the world

Onfy

pharmaceutical marketplace
in Germany



Joopay

fintech service for daily financial
transactions in Europe

Joom Logistics

business that provides logistics,
technology and infrastructure services
for crossborder eCommerce

JoomPro

platform for crossborder wholesale trade

Joom Search Team



- ML engineers;
- Software engineers;
- Analytics

Similar Products Model



Men Colorblock Lace-up Front Sneakers

SKU: sk2109154781296444 ★★★★★ (1851 Reviews)

20,25€

Color: White

Size

EUR39 EUR40 EUR41 EUR42 EUR43

EUR44 EUR45 EUR46

Tips: One Size Smaller

[Size Guide](#)

Qty: +

ADD TO BAG

Earn 21 SHEIN Points

Free Shipping 📦
FREE STANDARD SHIPPING
Estimated to be delivered on 27/06/2022 - 30/06/2022.

Return Policy 🛡️
[Learn More](#)

Description +

Size & Fit +

Customers Also Viewed

24,00€
Top Rated

16,25€

19,50€

21,75€

18,75€

19,75€

20,25€

24,75€

22,75€

15,00€

24,75€

20,25€

19,25€


22,75€

23,00€

Similar Products Model


Amazon

Compare with similar items




This item RhinoShield SolidSuit iPhone 12/12 Pro protective case

Add to Basket




RhinoShield Case Compatible with [iPhone 12 Pro Max] | SolidSuit - Shock-Absorbing & Slim Protective Case with Premium Finish - 3.5 Metre Drop Protection - Carbon Fibre Texture

Add to Basket



RhinoShield iPhone 12/12 Pro [Mod NX] Protective Case

Add to Basket



Black Rock - Ultra thin iced case suitable for Apple iPhone 12/12 Pro | carbon mobile phone case, thin, fibre cover (flex carbon black)

Add to Basket


SHEIN

Customers Also Viewed




Aliexpress


More To Love




Quick Dry Sport T Shirt Men'S...
6.54€
23,066 -72%
New User Bonus
703 sold ★ 4.7
15-Day Delivery
Free Shipping
Free Return



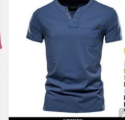
Summer Mens T Shirts Casua...
5.52€
New User Deal
314 sold ★ 4.5
Free Shipping




European And American Men...
6.33€
Top selling in AliExpress
793 sold ★ 4.5
15-Day Delivery




New Mens T Shirt Pure Color ...
5.96€
380 sold ★ 4.6
15-Day Delivery
Free Shipping




2021 Summer Top Quality Co...
9.1€
25,814 -69%
New User Bonus
1045 sold ★ 4.8
15-Day Delivery
Free Shipping




Summer Fashion Men's T Shi...



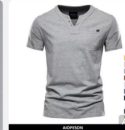
Sport Brand Shirts Breathabl...



High Quality Polyester Men R...

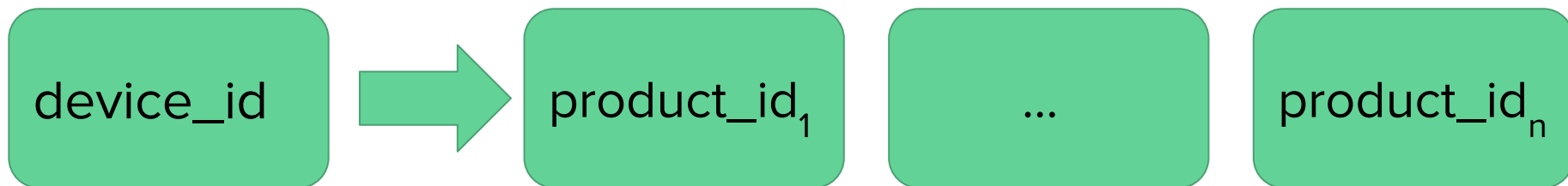


Men Long Sleeve Shirt Spring...



AIOFESON Casual Cotton Me...

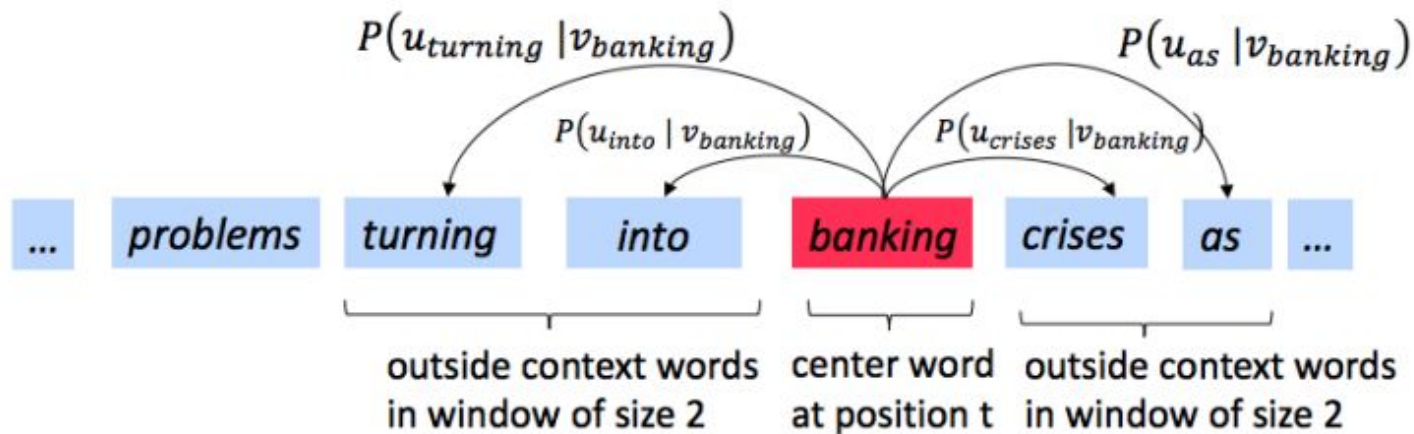
Similar products: idea of using Word2Vec



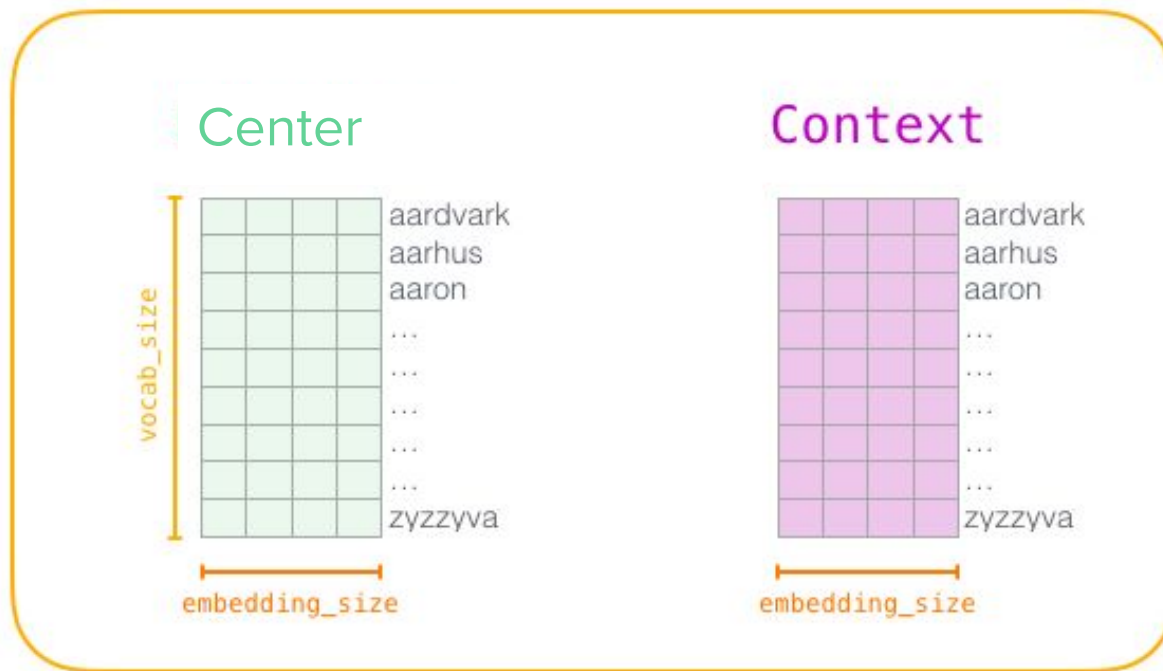
Similar products: idea of using Word2Vec



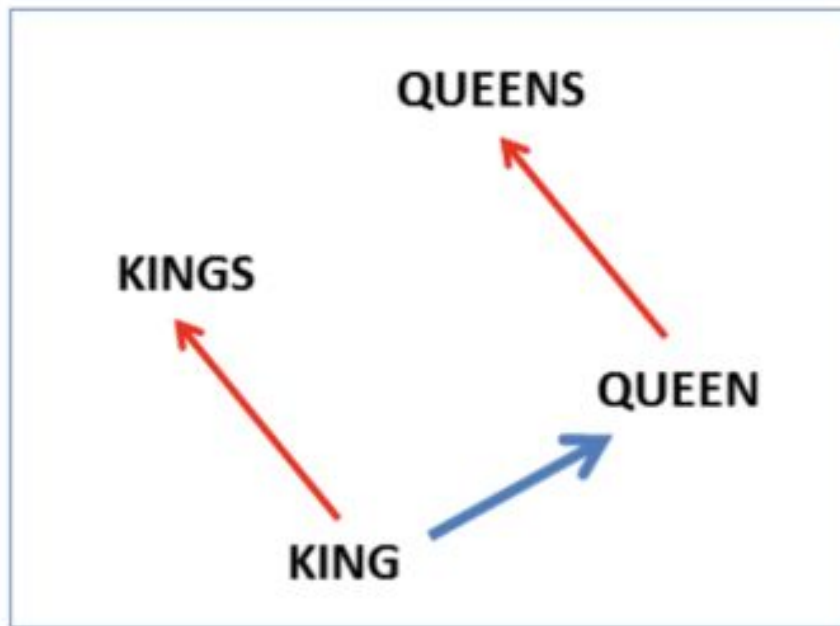
Word2Vec: recap



Center embedding and context embedding



Interpretation of embeddings



$$V(KINGS) - V(KING) \approx V(QUEENS) - V(QUEEN)$$

Issue: new products



Issue: new products

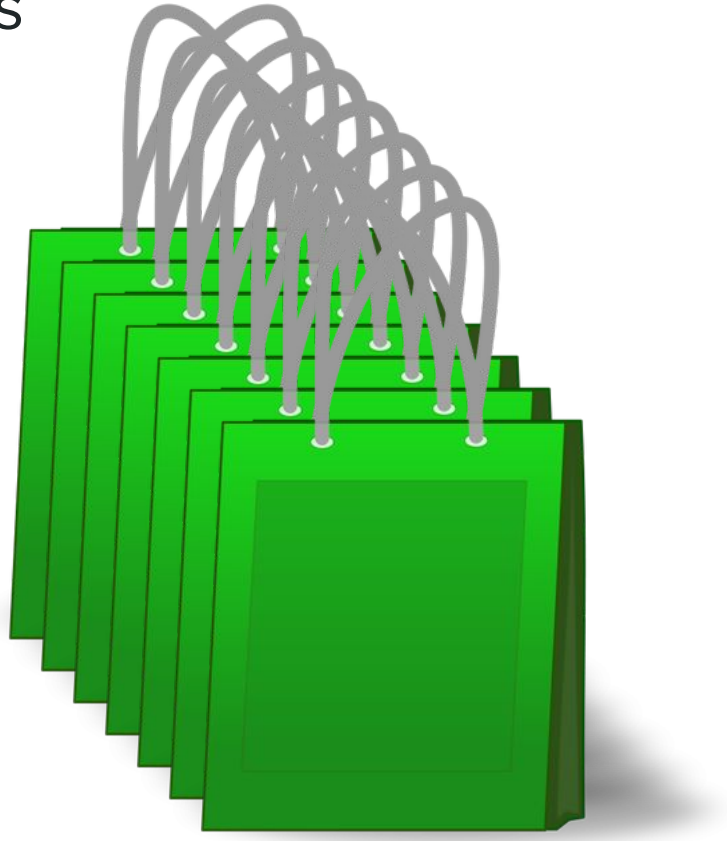


Image embeddings



Query Image




Text



Similar Images

Customer experience




iphone cases


×

?


Search

1


Notifications



Sign in



My orders



Shopping cart

≡ All categories

🛒 Users' reviews

Women's Clothing & Accessories

Footwear

Health & Beauty

Men's Clothing & Accessories

Home & Kitchen

Electronics

Baby & Kids

Automobiles & Motorcycles

Luggage & Bags

Hobby, Sport, Traveling


Watches

Pet products


Jewelry & Bijouterie

Industry & Business

Home / Catalog

 Electronics

>

 Luggage & Bags

Sort By default ▾

Price Any ▾

Color All ▾

Material All ▾


Brand All ▾

Seller's country All ▾


Fast delivery ☐

Phone model All ▾


Features All ▾




€5
★★★★★
Luxury Liquid Silicone Case For iPhone X XR XS Max 5 5S 6 6S 7 8 Plus 11 12...



€5
★★★★★
Luxury Cute Bear Phone Case For iPhone 13 12 11 Pro Max 13Pro 12Pro...



€4
★★★★★
Fashion Phone Case For iPhone 12 11 Pro X XR XS MAX 7 8 6 Plus Simple...










€3
★★★★★
For iPhone 13 12 11 Pro Max 13 12 Mini 7 8 XR XS SE 2020 Liquid Silicone Cove...

Customer experience

[All categories](#) [Users' reviews](#) [Women's Clothing & Accessories](#) [Footwear](#) [Health & Beauty](#) [Men's Clothing & Accessories](#) [Baby & Kids](#) [Automobiles & Motorcycles](#) [Luggage & Bags](#) [Hobby, Sport, Traveling](#) [Watches](#) [Pet products](#) [Jewelry & Bags](#)

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+14

3 of 19

For iPhone 13 12 11 Pro Max 2020 Liquid Silicone Cover with Camera Protection


★★★★★ 4.5 15,000+ reviews [Add to favorites](#) [Share](#)

€3 ⓘ
not including VAT 0,57 €

[Add to cart](#) [Buy now](#)


📅 Free shipping, 16 – 29 days

Colour: Black



Size iPhone X XS

My cart 1 product



€3
For iPhone 13 12 11 Pro Max 13 12 Mini 7 8 XR XS SE 2020...
Black, iPhone X XS

[Go to cart](#)

Customer experience

Similar products



€5



Luxury Metal TPU Ring Case for iPhone Soft Cover for iPhone 13 ...



€3



Ultra Thin Soft Silicone Back Protective Case Cover For Iphone...



€3



Shockproof Card Slot Silicone Soft Case Cover For iPhone 13 12 Pro...



€4



Luxury Silicone Shockproof Matte Phone Case For iPhone 11 12 Pro...



€21

Fashion 2 In1 For Apple AirPods 1 with Charging Box For iPhone 11...



€3



Shockproof Matte Clear Hard Phone Case For iPhone 13 Mini 1...



€3



Glitter Shockproof Transparent Smooth Soft TPU Back Cover For...



€3



Camera Protection Phone Case For iPhone 13 11 12 Pro Max Mini...



USLION

€4



Watercolor Painting Phone Case For iPhone 13 11 12 Pro Max X XR...



€3



Luxury Square Liquid Silicone Soft Case For iPhone 13 Pro Max 13...



€3



Case For iPhone 13 4S 5 5S 5C 6 6S X XR XS Max 7 8 Plus 11 Pro...

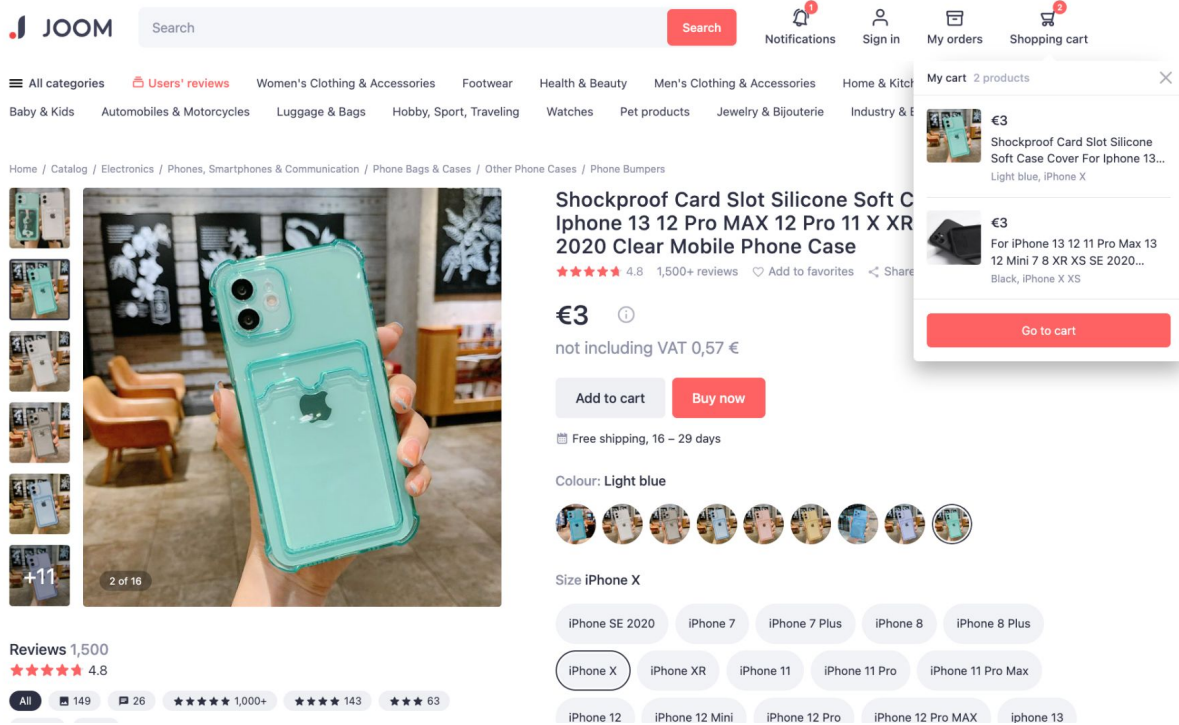


€4



For iPhone 13 12 Pro Max 12 11 XR XS 8 7 Astronaut Lanyard Silicon...

Customer experience



How to build
the Similar Products Model
if we lack of
user activity history?

How to build the Similar Products Model if we lack of user activity history?

- ~~word2vec approach~~

How to build the Similar Products Model if we lack of user activity history?

- ~~word2vec approach~~
- ~~image-based embeddings~~

How to build the Similar Products Model if we lack of user activity history?

- ~~word2vec approach~~
- ~~image-based embeddings~~
- to use content information for word2vec approach and to train the model on joom users' history ✓

Content Similar Products Model: product features

Home / Catalog / Baby & Kids / Toys & Hobbies for Kids / Dolls & Stuffed Toys / Stuffed & Plush Animals



Shark Plush Toy Big Fish Cloth Doll Whale Stuffed Children Birthday Gift

★★★★★ 4.7 19 reviews Add to favorites Share

from EUR 12

Add to cart

Buy now

Shipping from 19 days

Color



Size 50cm

50cm

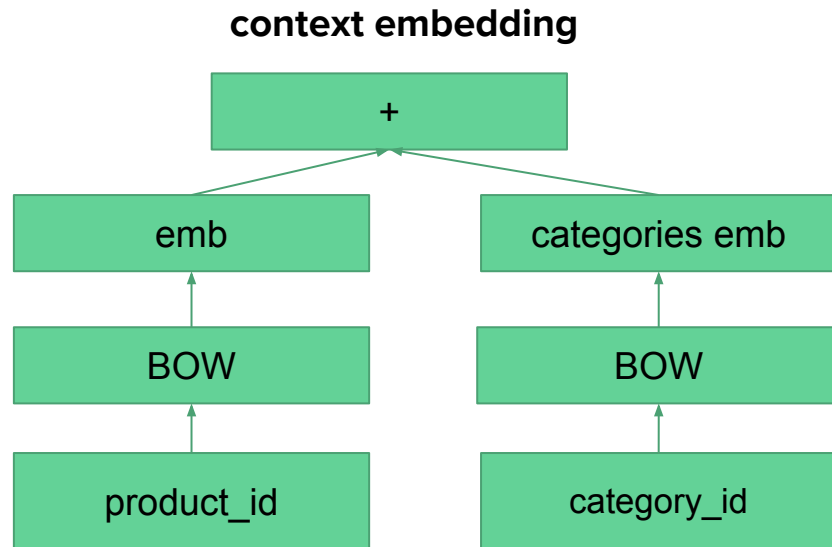
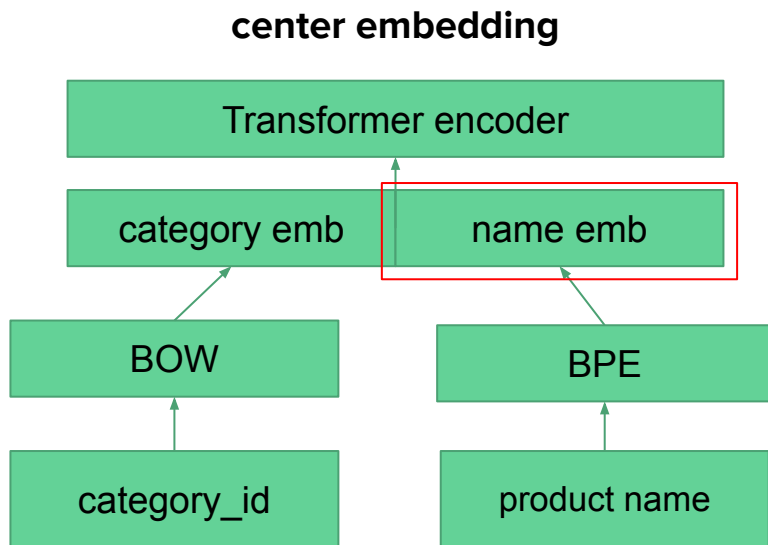
category id

product name

Optimus Prime!!!

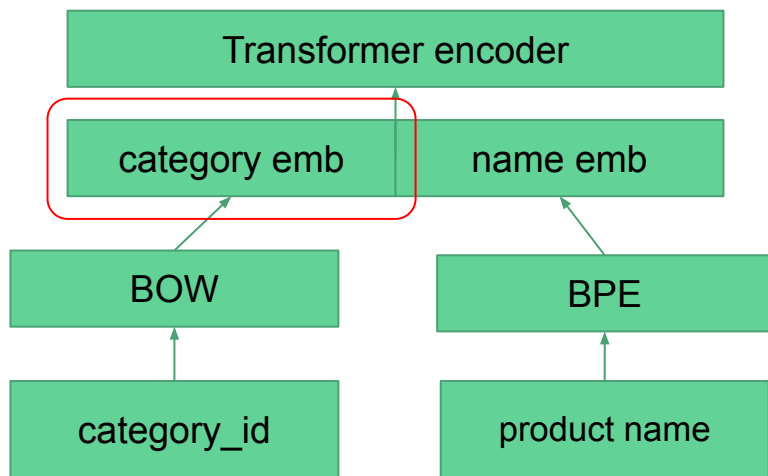


Content Similar Products Model: architecture

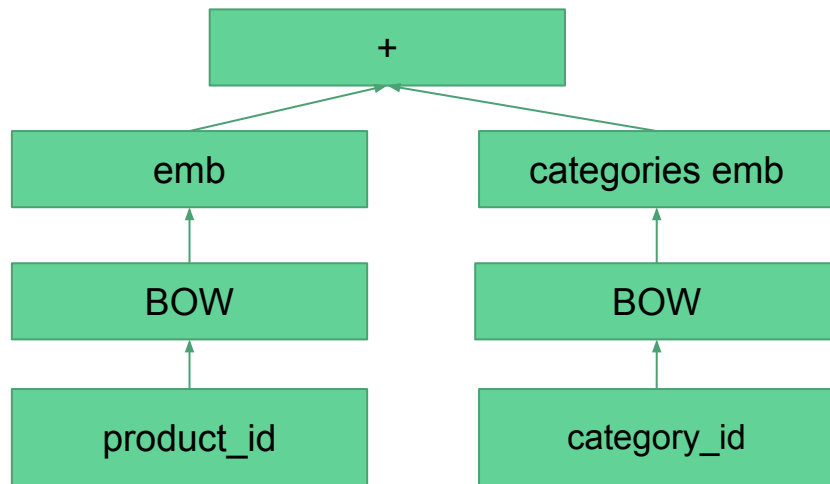


Content Similar Products Model: applications

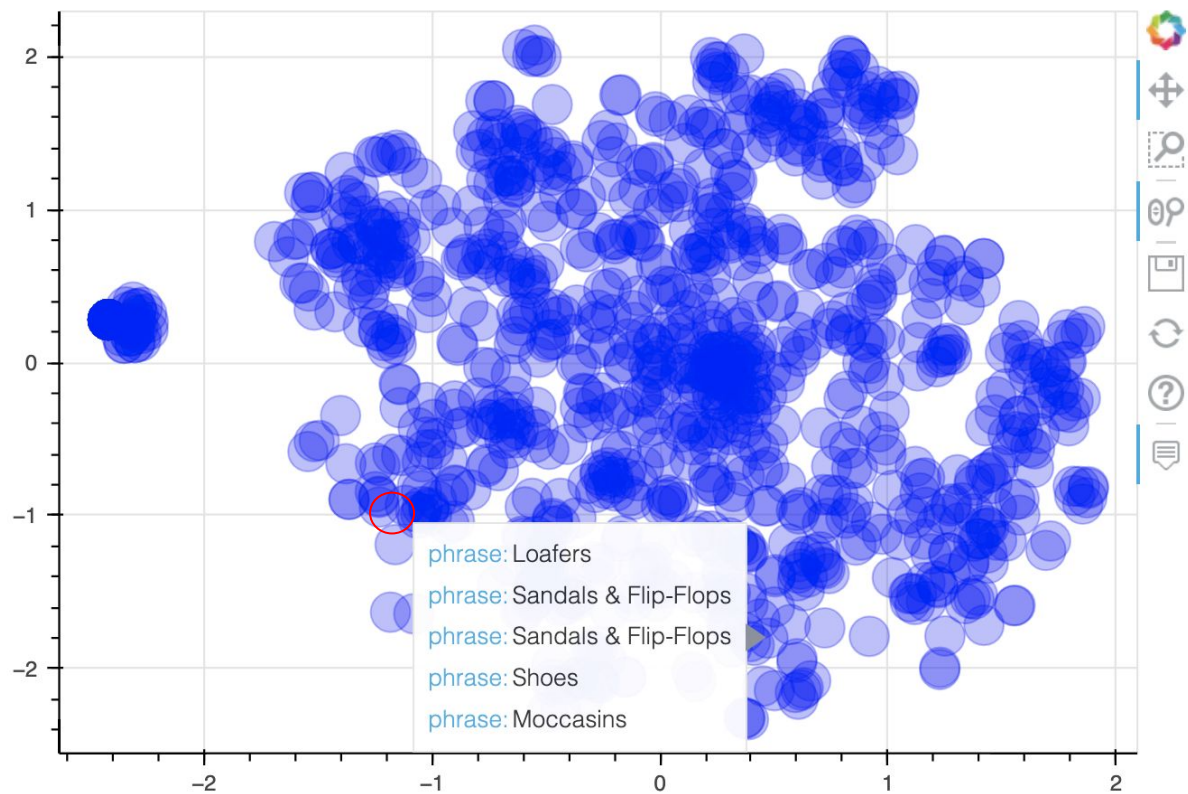
center embedding



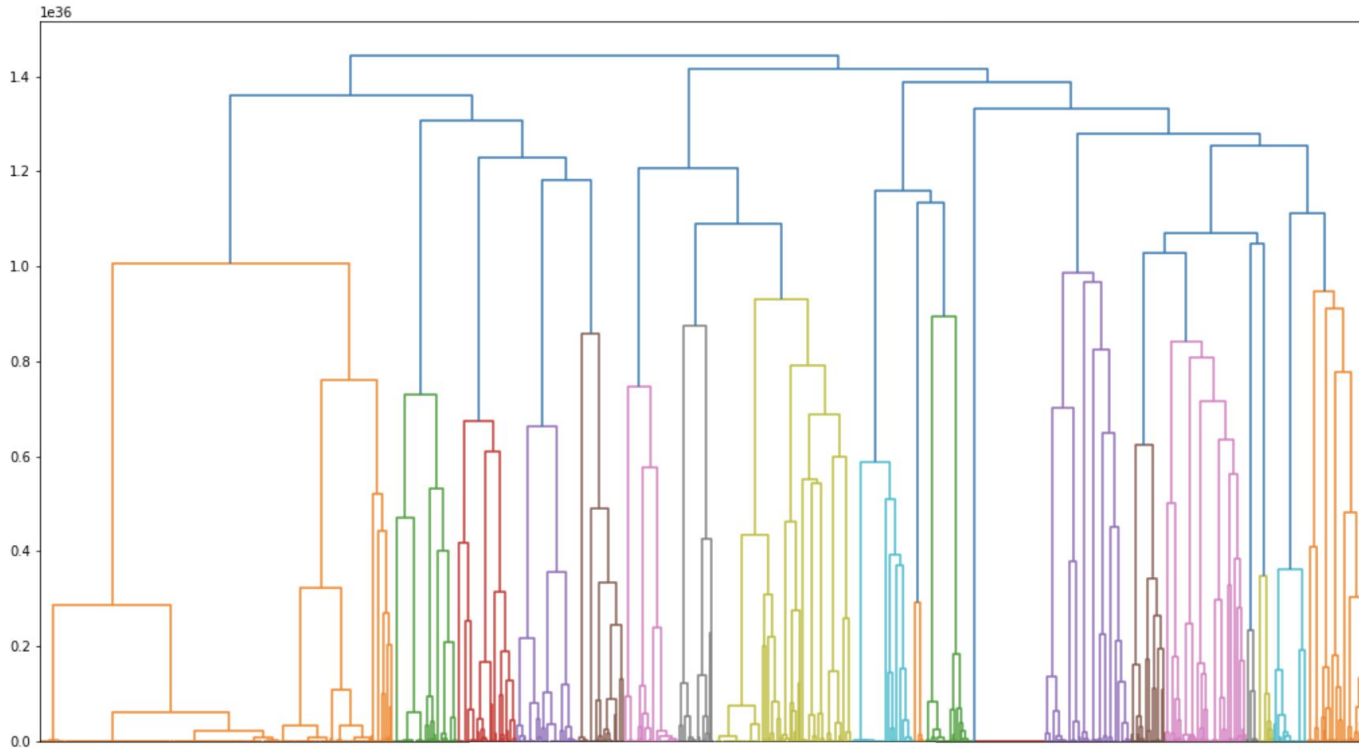
context embedding



Category embeddings: 2D representation with TSNE



Clusterization



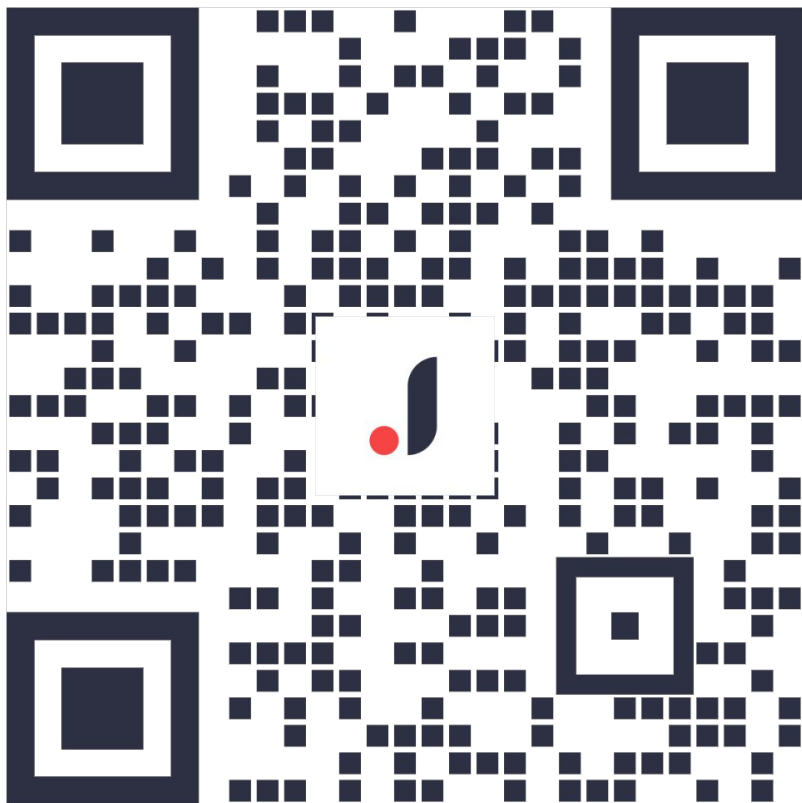
Conclusion

- Similar Products Model for B2C
- Content Similar Products Model for B2B
- Why it's useful in e-commerce platforms



Aigul Gazimova

jesaig@joom.com



BTW, we are hiring!