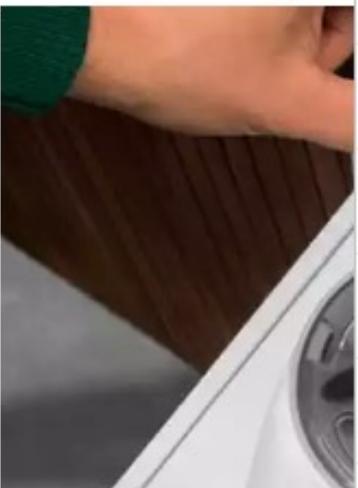


User centricity beginning with the first keystroke

Tobias Kässmann, Tom Gilke



Ariel Pods gra



jeans

×



jeans **herren**



jeans **damen**



jeans **shorts damen**



jeans **shorts herren**



jeans **bermuda damen**



jeans **damen 7/8 lange**



jeans **jacke damen**



jeans **kurz damen**



jeans **rock damen**



jeans **kurz herren**



Service



Mein Konto



Merkzettel



Warenkorb

e . Sport . Schuhe . Große Größen
imarkt . Marken . Spielzeug . %Sale%

% auf ausgewählte TVs

bis Mo., 15.08.





WHAT?

A whole team only for the autosuggest?

Worach suchst du?

Service Mein Konto Merkzettel Warenkorb

Inspiration . Damen-Mode . Herren-Mode . Baby & Kind . Sport . Spielzeug . Drogerie

Multimedia . Haushalt . Küche . Heimtextilien . Möbel . Baumarkt . Marken . %Sale%

20% auf Küchen und Haushaltswaren nur bis Mo, 26.06.

Empfehlungen für dich

					
PLAYSTATION 5 PlayStation 5, inkl. God of War... € 619,00 € 549,00	NIKE SPORTSWEAR COURT VISION LOW NEXT N... ab € 84,99	PLAYSTATION 5 Digital Edition € 449,99	NIKE SPORTSWEAR COURT VISION LOW NEXT N... € 79,99	PLAYSTATION 5 Disk Edition € 549,99	PLAYSTATION 5 Call of Duty: War... UVF € 599,00



damen capri jeans blue stone

Service Mein Konto Merkzettel Warenkorb

Inspiration . Damen-Mode . Herren-Mode . Baby & Kind . Sport . Spielzeug . Drogerie

Multimedia . Haushalt . Küche . Heimtextilien . Möbel . Baumarkt . Marken . %Sale%

„damen capri jeans blue stone“

Größe Größensystem wählen
US-Größen
XXS XS S M L XL

Verkäufer Nach Verkäufer suchen

BELIEBT OTTO (2)

WEITERE TOM TAILOR (3)

Kaufhaus Martini (2)

Kaufhaus Wohla Crailsheim (2)

MaxMara Milano Collezione (2)

8 Produkte Sortieren nach
TopSeller

Levi's logo

Neue Must-Haves für warme Tage. Levi's® shorts.

JETZT ENTDECKEN >



alle Angaben in Euro, inkl. Steuer

Es gelten die AGB von OTTO auch hinsichtlich des Widerrufsrechts

Jetzt zum genannten Preis bestellen

(Mit Klick auf „Jetzt zum genannten Preis bestellen“ wird die Bestellung abgeschlossen)

Wir liefern CO₂-neutral durch Kompenstation





User centricity?

Your answer is just **ONE**
step ahead



Let's build baseline features...

1.

Prefix matching

“p”:

- Playstation
- Pullover
- Pool
- Polo shirt

2.

Spellcheck

dsignal -> designal

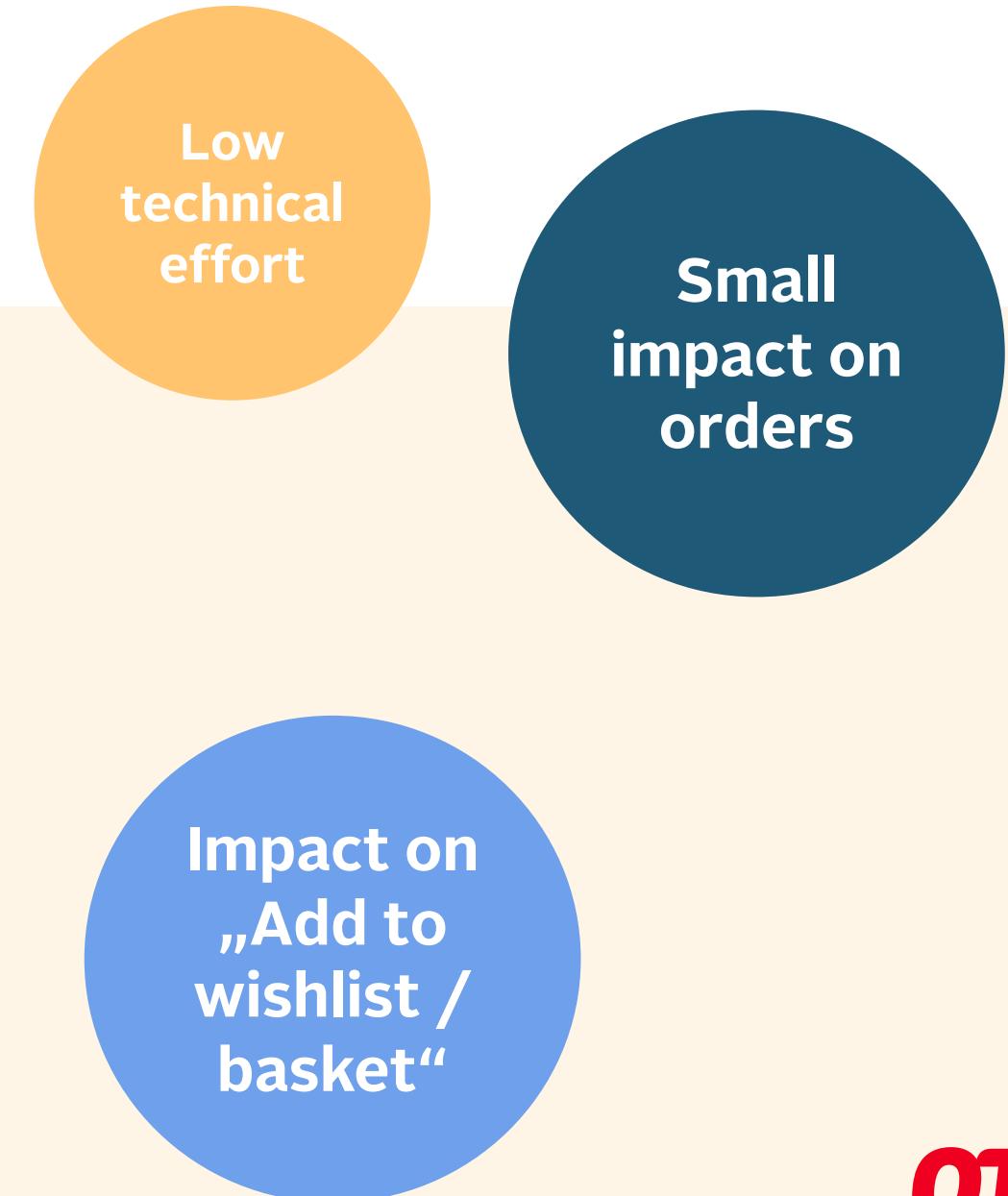
OTTO

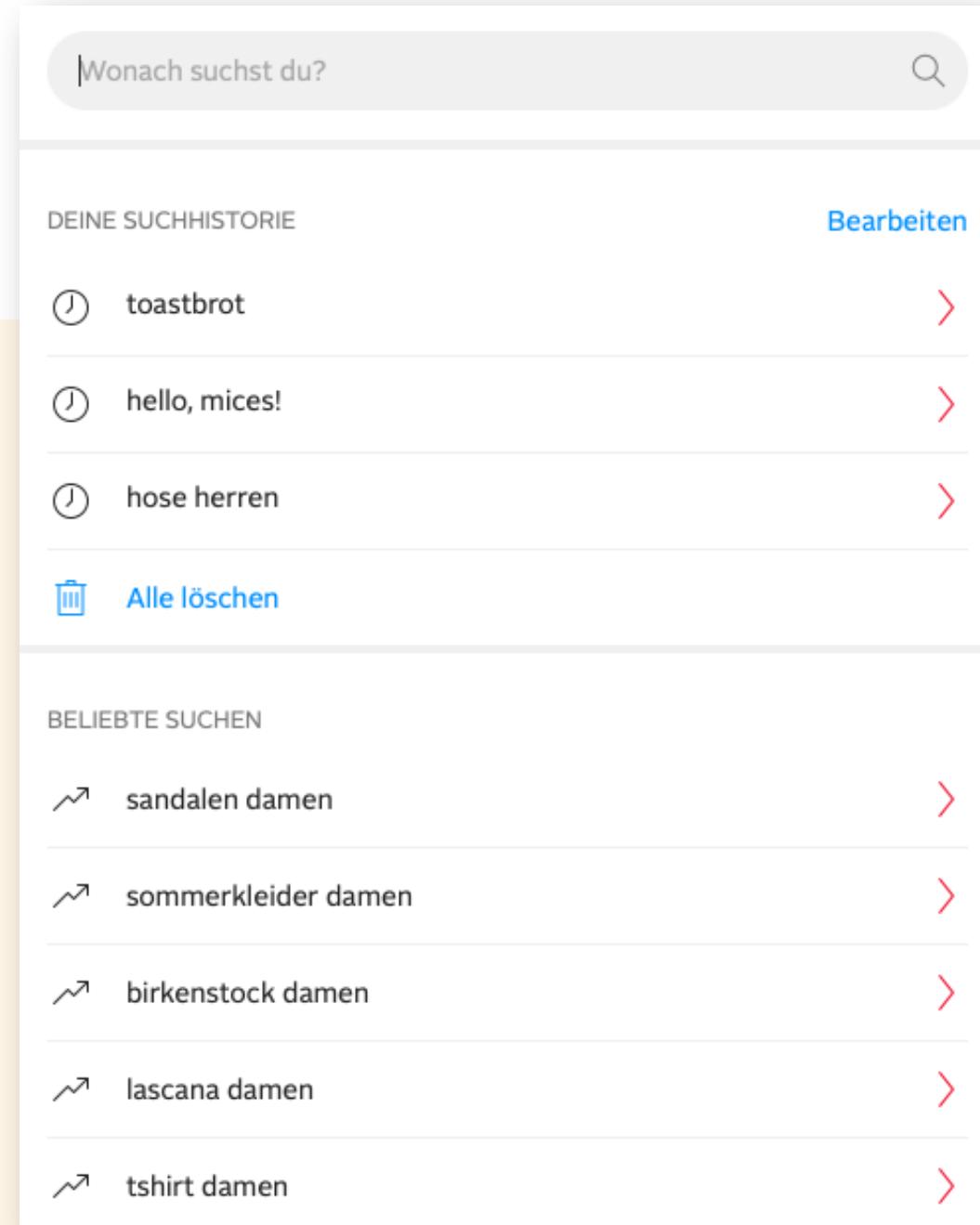
Initial Interaction

Wonach suchst du? 🔍

BELIEBTE SUCHEN

- ↗ sandalen damen >
- ↗ sommerkleider damen >
- ↗ birkenstock damen >
- ↗ lascana damen >
- ↗ tshirt damen >
- ↗ tshirt herren >
- ↗ bikini damen >
- ↗ kleider damen sommer >
- ↗ pool >
- ↗ kurze hose herren >





A screenshot of the OTTO search history interface. At the top is a search bar with the placeholder "Wonach suchst du?" and a magnifying glass icon. Below the search bar is a section titled "DEINE SUCHHISTORIE" (Your search history) with a "Bearbeiten" (Edit) button. The search history list includes:

- toastbrot
- hello, mices!
- hose herren

Below the search history is a "Alle löschen" (Delete all) button. The next section is titled "BELIEBTE SUCHEN" (Popular searches) and lists:

- sandalen damen
- sommerkleider damen
- birkenstock damen
- lascana damen
- tshirt damen

Each search item in the history and popular search lists has a red arrow icon to its right.

Medium
technical
effort

Effort
reduced a
lot

Suggest
usage: uh
wow!

More
impact on
orders

OTTO

Keystroke 5

hose|

×



hose damen



hosenrock damen



hosenanzug damen



hosen herren



hosenrock damen sommer



hosenanzug damen 2teilig modern



hose damen sommer



hosen damen sommer



hose



hosen



hose|

×



hose damen



hose damen sommer



hose herren



hose weiß damen



hose sommer damen



hose kurz damen



hose kurz herren



hose damen elegant



hose 7/8 damen sommer



hose weiss damen



OTTO

```
def normalize_query(q):  
    return unquote_plus(q).strip().lower()  
    return unquote_plus(q).lstrip().lower()
```

, 12:17 | 🌱 [sandy] Oh. This is the live state
, 10:19 | 🌱 [inno] try with lstrip [only for nonlive]

„No“
technical
effort

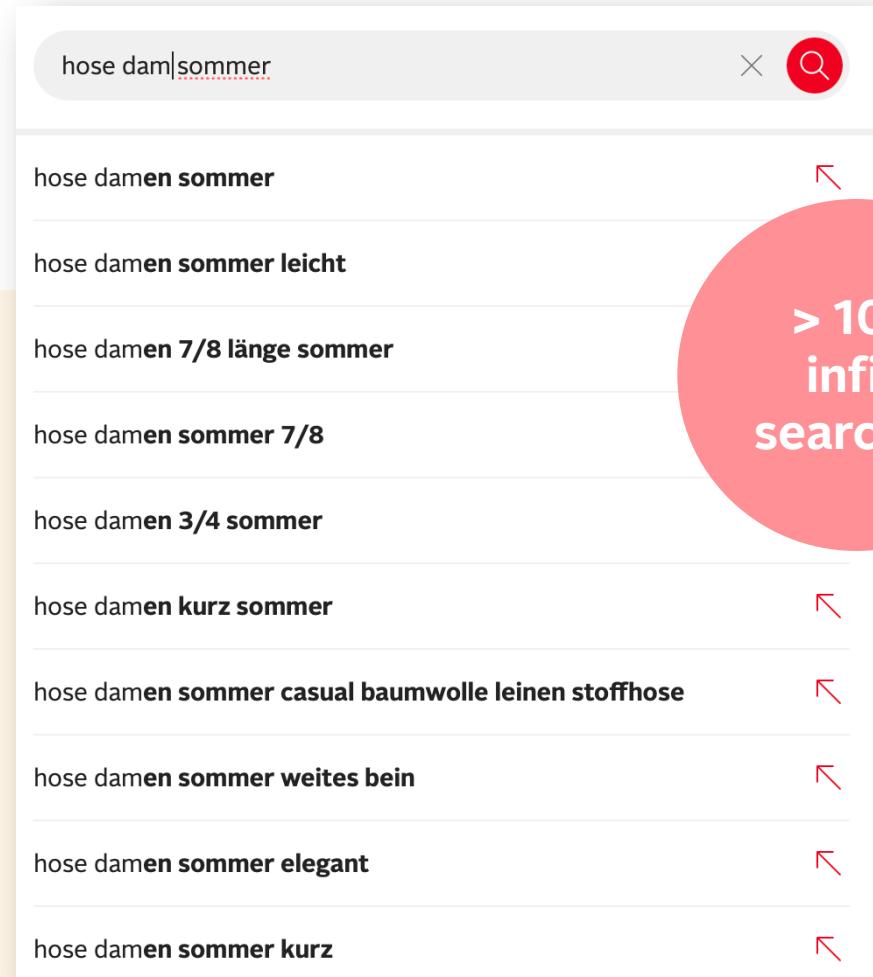
Less effort
& more
relevant
suggestions

Suggest
usage

Increased
responsive-
ness

OTTO

Keystroke 5 of 10



> 10%
infix
searches

Again
„no“
technical
effort

Keystrokes
reduced

Suggest
usage
increased

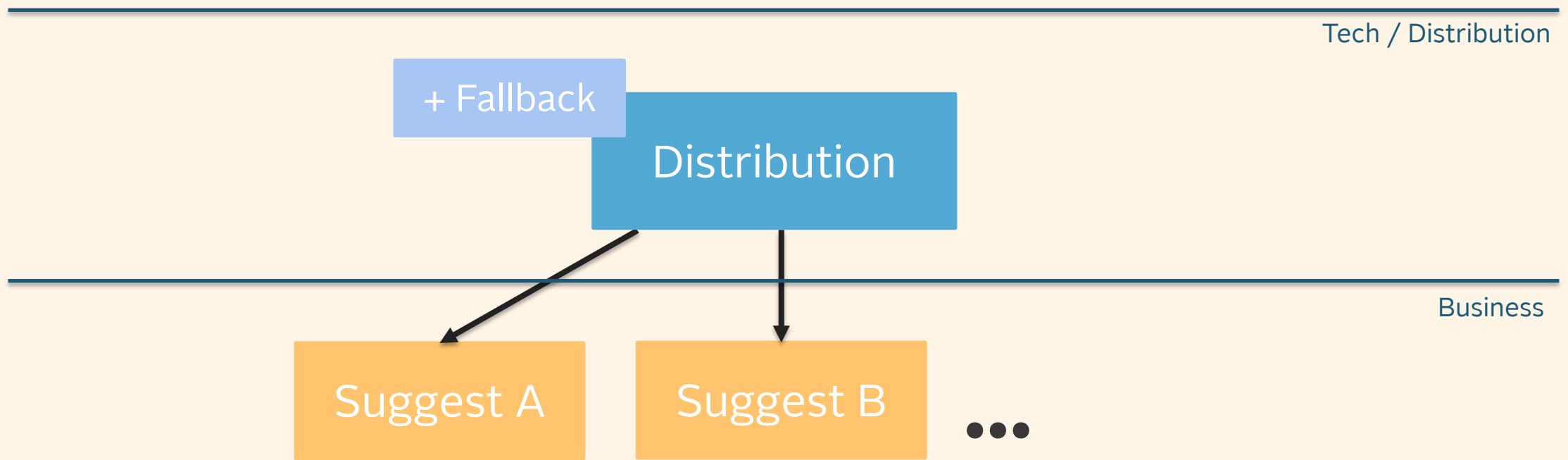
Increased
responsive-
ness

OTTO

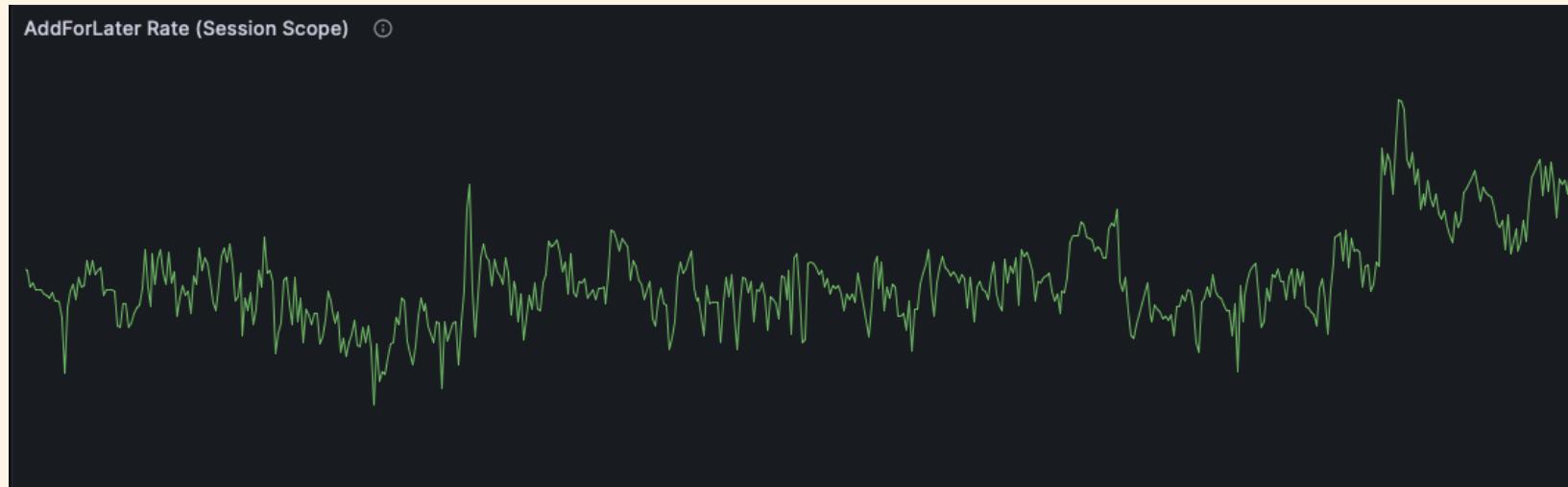
**And a lot others:
spellchecking, clustering, ...**

Infrastructural Enablers

A/B-test setup: easy, fast, failure-proof

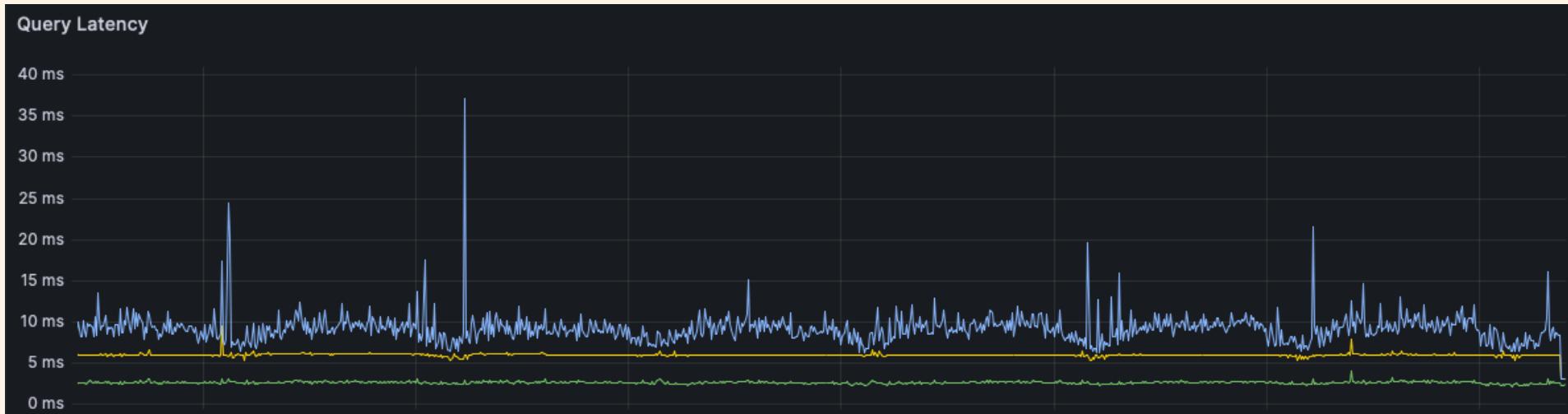


#Measurability & #Visibility



OTTO

Infrastructure build to scale



OTTO

Vespa.ai



OTTO

Let's build upon this

OTTO

On every keystroke!

Reranking

1.

Select

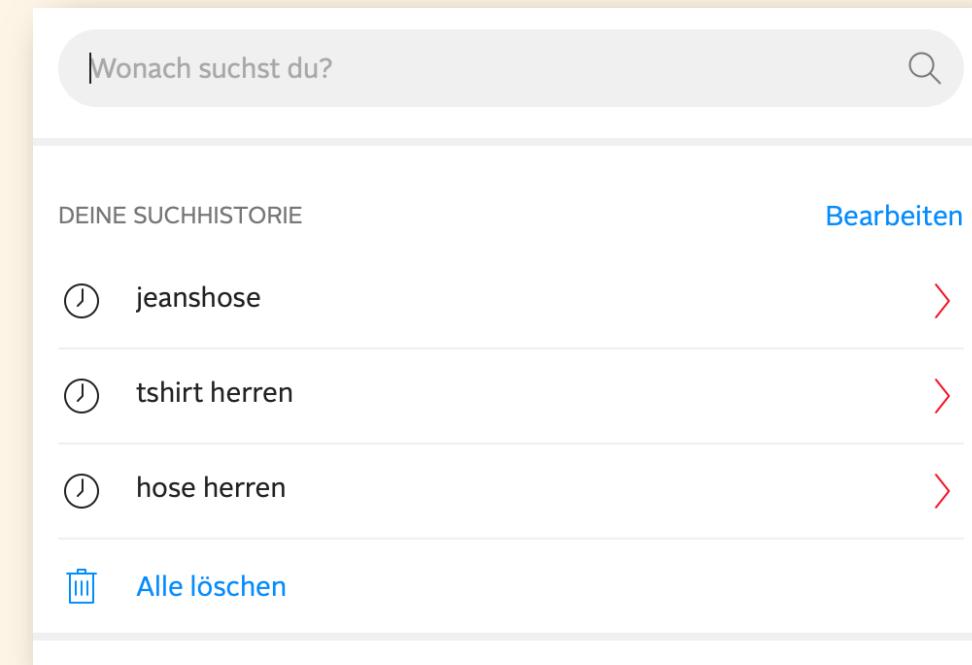
2.

Base
Ranking

3.

Reranking

Model



OTTO

bades| X 🔍

- badeshorts herren ⬅
- badeshorts damen** ⬅
- badeschuhe damen ⬅
- badeschuhe herren ⬅
- badeschuhe ⬅
- badeschuhe kinder ⬅
- badeshorts jungen** ⬅
- badesandale herren** ⬅
- badeshorts ⬅
- badesandale damen ⬅

Wonach suchst du? 🔍

DEINE SUCHHISTORIE Bearbeiten

- ⌚ jeanshose ➡
- ⌚ tshirt herren ➡
- ⌚ hose herren ➡
- [trash] Alle löschen

bades X 🔍

- badeshorts herren ⬅
- badesandale herren** ⬅
- badeshorts jungen** ⬅
- badeschuhe herren ⬅
- badeschuhe ⬅
- badeschuhe kinder ⬅
- badeschuhe damen** ⬅
- badeshorts damen** ⬅
- badeshorts ⬅
- badesandale damen ⬅

Personalization

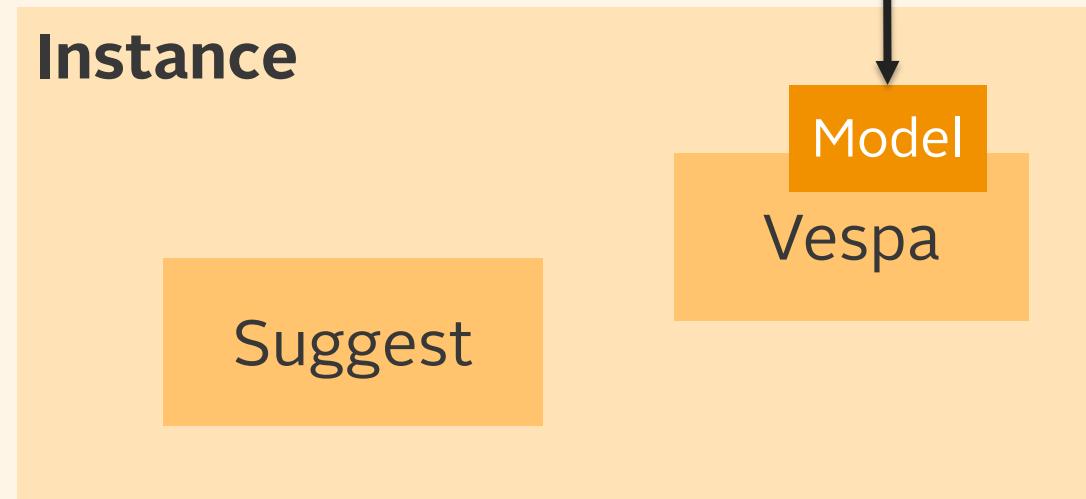
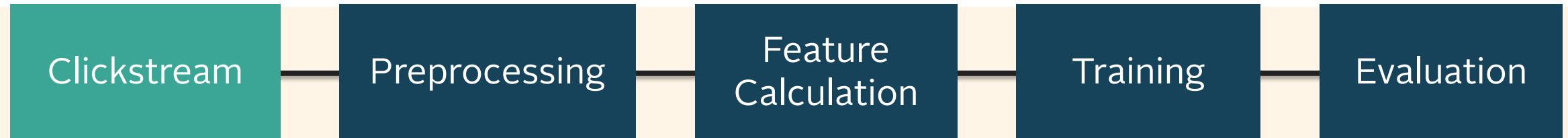
Great
impact on
suggest
usage

Really
high
technical
effort

Avg click
position
reduced a
lot

Effort
saved

Model Pipeline



Keystroke 35...

ML Fallback

1.

Prefix matching

2.

Spellcheck

3.

BERT

hello team squirrel I need a tshirt|

X



tshirt



sport tshirt



basic tshirt



tshirt sport



champions tshirt



long tshirt



tshirt arbeit



tshirt top



tshirt long



tshirt



OTTO

jeans women blue|

×



damen capri jeans blue stone



jeans light blue damen



herren jeans light blue



blue jeans



blue jeans damen



blue washed jeans damen



jeans curve dark blue



jeans herren blau blue



blue light jeans herren

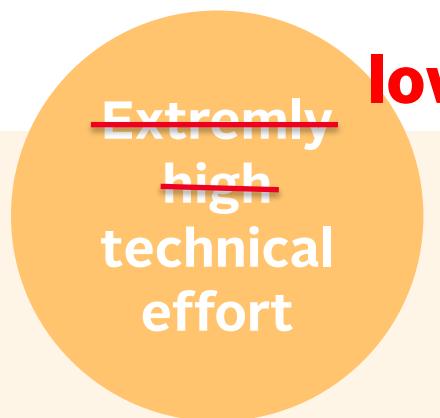


hose dark blue



OTTO

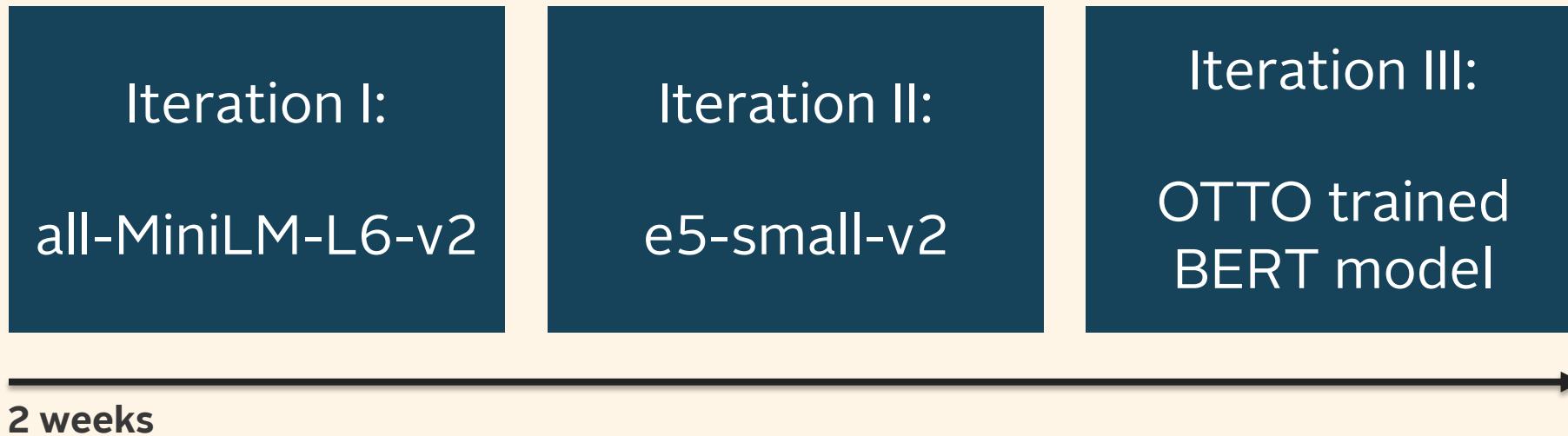
ML Fallback



low



Model Test Iterations



What makes this possible?

Technical enablers

Own
your
vertical

#Visibility

Will it
scale?

Make
testing
easy &
safe

Team enablers

Invest into
knowledge
sharing

Stay up
to date

Space &
time for
innovation

Trust

OTTO

**Do not underestimate the
autosuggest!**

OTTO

Questions?

Your answer is just ONE step ahead!