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AUDIENCE ADDRESSABILITY NOW/THEN

ACCESS VIDEO.

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Audience Addressability - Now/Then

1. Intro SHG
2. What is audience addressability?
3. Key challenges in a cookieless world
4. Approaches at SHG
   a. Information Extraction
   b. Model Generalization
   c. Recommendation & Targeting

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HI, WE ARE THE LARGEST INDEPENDENT VIDEO COMPANY IN EUROPE.

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VIDEO ACCOUNTS FOR 82% OF ALL INTERNET TRAFFIC.

82%

Web Traffic

Source: https://newsroom.cisco.com/press-release-content?type=webcontent&articleId=1955935

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VIDEO BOOSTS USER ENGAGEMENT

95%

of a message is retained by users when **watching video**

(vs. 10% when reading text)

60%

of people would rather watch **video** than read a text

88%

more time is spent by avg. users on websites with video

13sec

more time is spent by avg. users on Dumont websites with ShowHeroes video

Source: https://www.insivia.com/50-must-know-stats-about-video-marketing-2016/, https://biteable.com/blog/video-marketing-statistics/

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WHERE IS VIDEO INVENTORY BOUGHT NOWADAYS?

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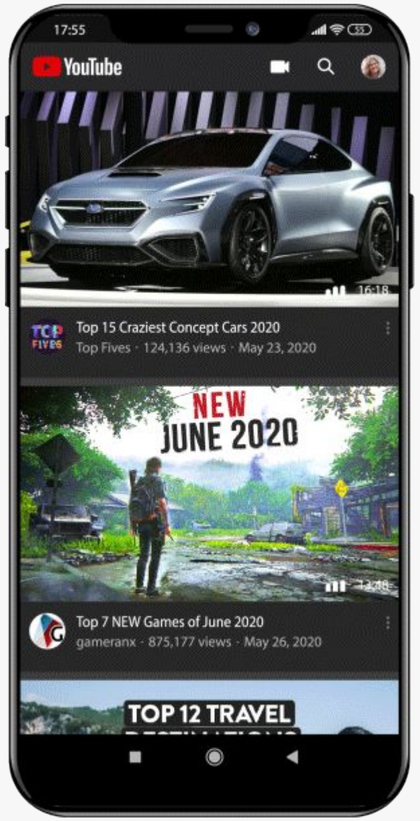
FACEBOOK

- ✓ HIGH REACH
- ✓ TARGETING OPTIONS
- × INTRANSPARENCY
- × PERSONALIZED FEED
- × NO / LIMITED VIDEO CONTENT
- × DISASTROUS VTR%

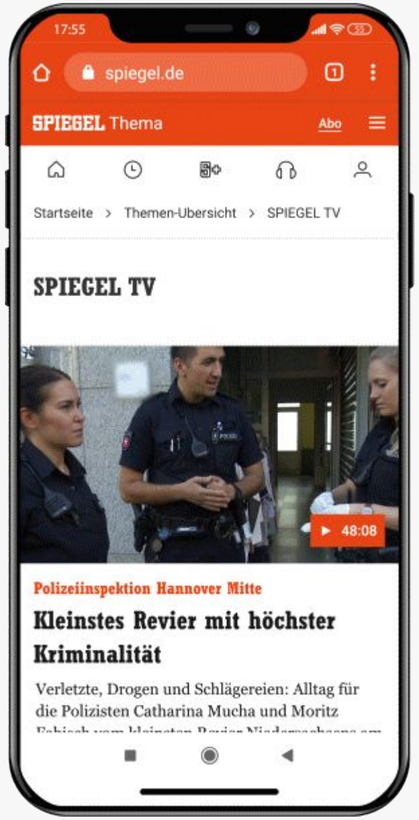


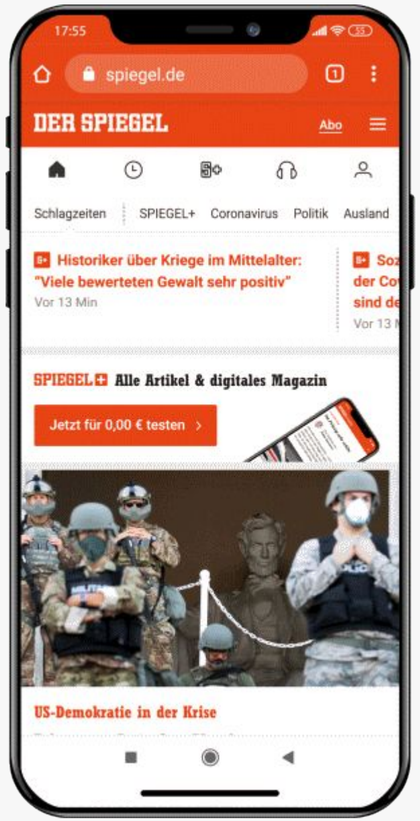
YOUTUBE INSTREAM

- ✓ ENGAGEMENT
- ✓ "VIDEO IN VIDEO"
- × UNCONTROLLED ENVIRONMENT (UGC)
- × FORCED VIEWS

PREMIUM INSTREAM

- ✓ HIGH VTR%
- ✓ "VIDEO IN VIDEO"
- × LIMITED REACH
- × LIMITED EDITORIAL CONTENT





OUTSTREAM

- ✓ HIGH REACH
- ✓ ENGAGEMENT
- × LOW VTR%
- × NO VIDEO CONTENT

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SEMANTIC ENGINE

ShowHeroes Harvester

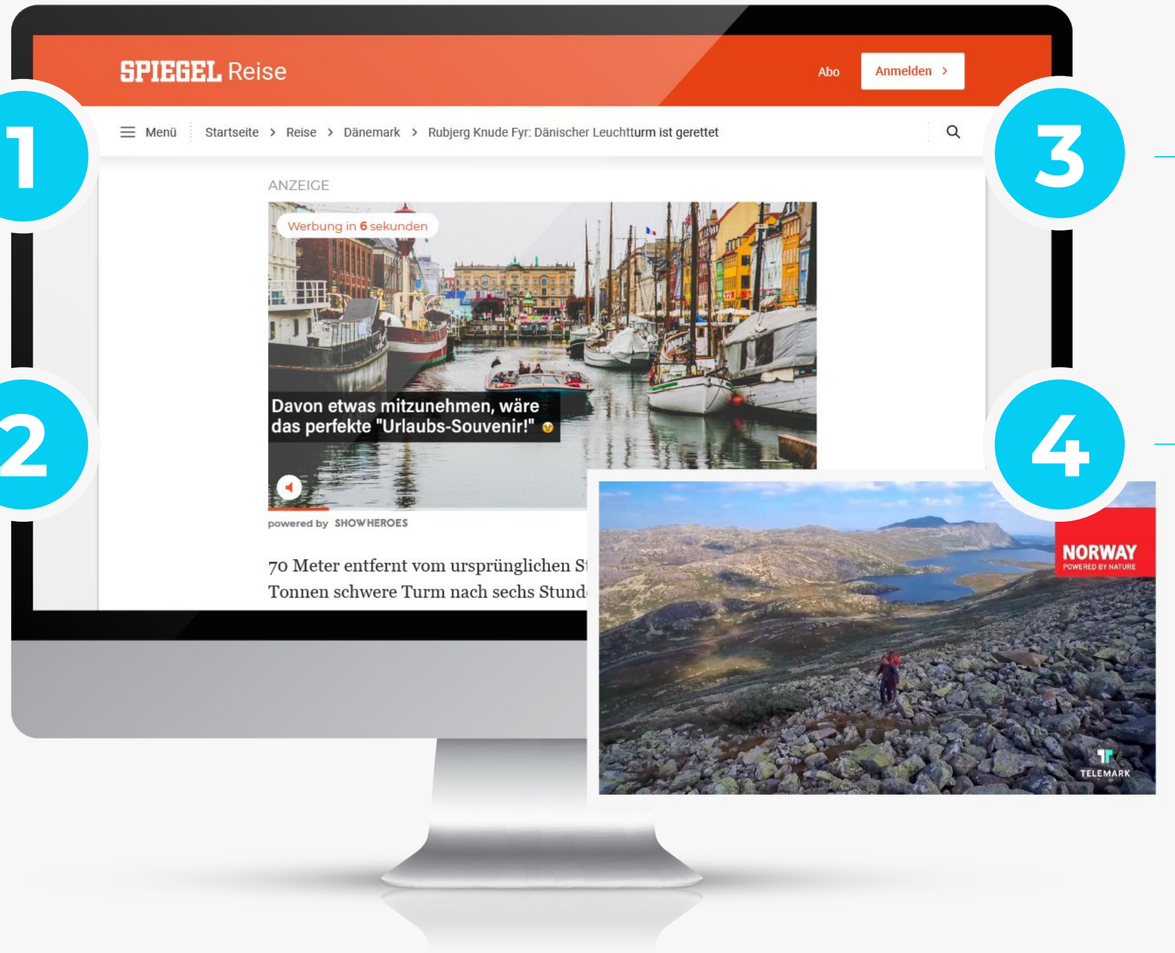
Scans website for:

- URL
- Keywords and other metadata
- Content

SemanticHero

Analyzes website content for:

- Important keywords
- IAB categories
- semantic concepts a.k.a. the context
- Sentiment/brand safety (overall / campaign based)



ShowHeroes Video Library

Selects videos from:

- Our own 35.000+ professionally produced content clips

ShowHeroes AdHero

- Identifies and delivers matching ads from direct & programmatic demand sources

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AUDIENCE ADDRESSABILITY

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Audience Addressability

- The “**Holy grail**” in advertising
  “Reach your key customers, the ones willing to spend on your product”

- Traditionally (print): place ads in physical vicinity of editorial content that provides a “frame”

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Audience Addressability

- State-of-the-art
  - marking users with cookie signals
  - connect known user properties
  - target against users directly
  - Usually with some data provider in the middle that does retargeting or defines “audience segments” based on socio-demographic data (gender, age etc.)

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KEY CHALLENGES

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Challenges

1. **Growing awareness for user privacy and user consent**
   - For storing information on the device
   - For creating a personalized ad profile
   - For using the personalized ad profile
   - Manage legal basis for all of those
   - *What to do if user does not give consent?*

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Challenges

2. Managing campaign reach

- Target audience segments are limited in size
- With this comes a limit in reach/available opportunities to match the target group
- Find good balance between delivery in target group and ensuring overall delivery volume

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Challenges

3. 3rd party cookie blocking

- Firefox/Safari already do it
- Chrome to follow
- No access to 3rd party cookies, 1st/2nd party only
- *What do we do without user data?*

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APPROACHES AT SHG

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Approaches at SHG

1. Fine grained consent management using industry standards

2. Replace 3rd party data and resort to 1st/2nd party data

3. Leveraging known information: page meta data, content and available user data

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Approaches at SHG

1. Fine grained consent management using industry standards

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INFORMATION EXTRACTION

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URL → DOWNLOAD → EXTRACT TEXT AND ADDITIONAL DATA AUTHOR, IMAGES, PREDEFINED KEYWORDS ETC. → PUT INTO DATABASE FOR FURTHER ANALYSIS

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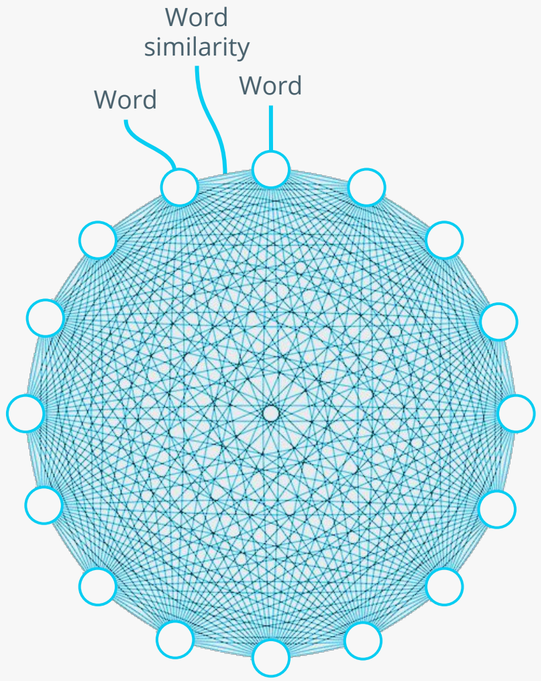
SEMANTIC HERO

KEYWORD EXTRACTION

- Run PageRank
- High PageRank → Important keyword
- Idea: keyword central to many terms is also central in describing the document
- Create human-readable, high-level document description

WEBSITE



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SEMANTIC HERO

ENTITY EXTRACTION

- Bi-directional LSTM term sequence model
- Extracts Named Entities with up to 90% accuracy
- Named Entities extracted: Persons, Organizations, Locations, Miscellaneous
- Enrich keyword set

WEBSITE

DEEP NEURAL NETWORK

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MODEL GENERALIZATION

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IAB CATEGORIZATION (LEARNING)

WIKIPEDIA

MACHINE LEARNING ALGORITHM (STATISTICAL LANGUAGE ANALYSIS)

20-250 CONCEPTS

SHOWHEROES ENGINE

- **IAB 5** Education
- **IAB 8** Food & Drink
  - **IAB 6** Coffee / Tea
  - **IAB 12** Health/Low Fat Cooking
  - **IAB 16** Vegan
- **IAB 6** Family & Parenting
- **IAB 7** Health & Fitness

Annotations

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IAB CATEGORIZATION (GENERALIZATION)

WEBSITE

TRAINED MODEL

EXTRACTED CONCEPTS

Lookup

SHOWHEROES ENGINE

- **IAB 5** Education
- **IAB 8** Food & Drink
  - **IAB 6** Coffee / Tea
  - **IAB 12** Health/Low Fat Cooking
  - **IAB 16** Vegan
- **IAB 6** Family & Parenting
- **IAB 7** Health & Fitness

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RECOMMENDATION AND TARGETING

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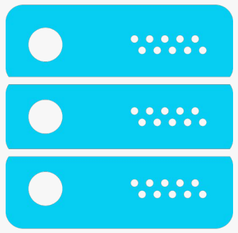
TOPIC DETECTION AND TARGETING

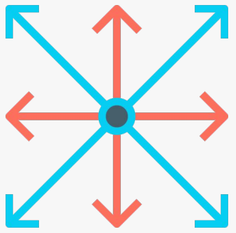


OUR DATABASE

DIFFERENT MODELS/DIFFERENT NUMBER OF CONCEPTS

EXTRACTED CONCEPTS

- **Learn semantic concepts**
- **Each concept has different probability for given document**



VECTOR REPRESENTATION

- **CREATES VECTOR REPRESENTATION FOR EACH DOCUMENT**
  - Each model learns a vector space with differing dimensions
  - Each document is a point in some n-dimensional semantic space
- **ALLOWS FOR TARGETING OF SPECIFIC SEMANTICS**
  - Semantic categories available for targeting

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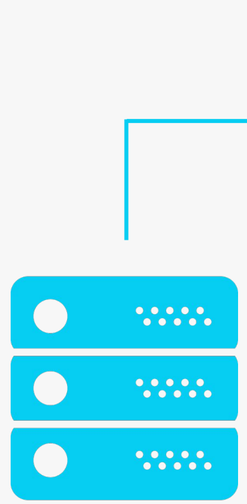
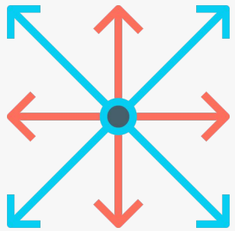
COOKIELESS TARGETING AND AUDIENCE PREDICTION



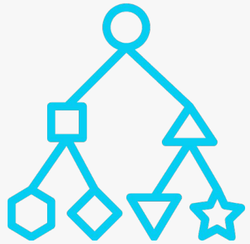
OUR DATABASE

TRAINED MODELS

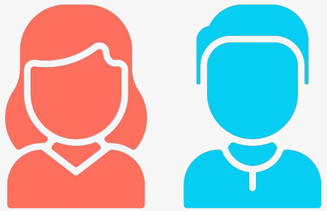


VECTOR REPRESENTATION

USER DATA (GATHERED WITH CONSENT, STORED ONLY IN AGGREGATED FORM



CLASSIFIER



- LEARN CLASSIFIER
- PREDICTS LABEL (E.G. MALE/FEMALE USER) BASED ON DOCUMENT REPRESENTATION

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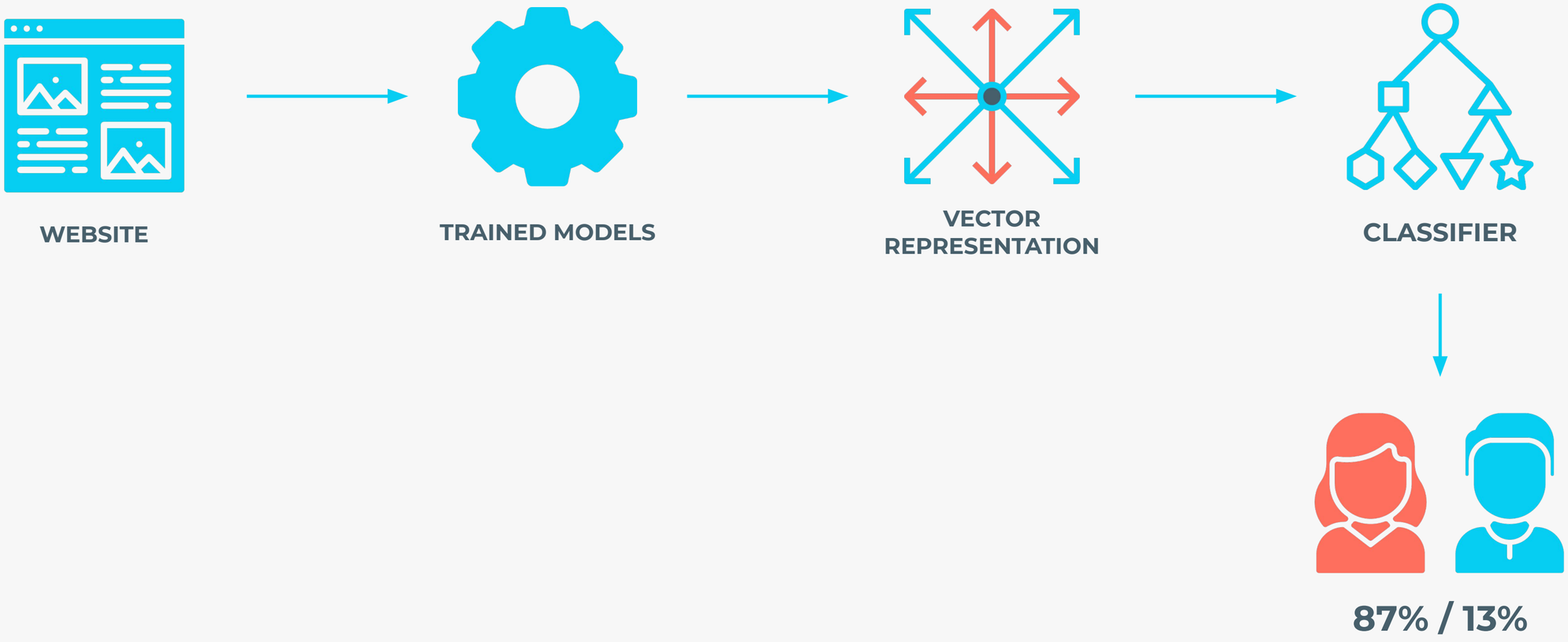
COOKIELESS TARGETING AND AUDIENCE PREDICTION



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Conclusion

Leveraging known information:

- Keywords (learned from the data)
- NLP tasks (NER, POS-tagging)
- Document classification
- Audience segment prediction from content

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Thank you!

And contact us!

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