The Future of Shopping with A.I

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Head of Platform
ViSenze
About ViSenze

• Powering Visual Search for leading retailers and brands
• Deep learning spin-off from National University of Singapore & Tsinghua University
• Reaching 300 million shoppers today
Now picture all of that inside your pocket…
Shop what you see.
The Visual Web

2.5 Trillion
Photos shared in 2017: Deloitte

3 Billion
Photos shared per day on Facebook and Snapchat alone: KPMG

- 80% of Big Data is images and videos
- 95% of the Digital Universe is not searchable via keywords
- Manual tagging is labor intensive, time consuming, and unscalable
- Volume of images and videos shared online will double every three years

Source: IDC Whitepaper
Retailers Are Fast Turning To A.I.

Deep learning lets ecommerce sites interpret and group images, which makes for better product recommendations and search.

e-Marketer Visual Commerce Report 2017
Capturing Shopping Interest Anytime, Anywhere for Anyone

“Asos has seen great engagement from visual search. The feature could eventually become the way many shoppers discover outfits in its app.”
Richard Jones
Director, Product Management, ASOS
Sept 2017

Asos sees potential in visual search to drive sales
Digiday, October 16, 2017
Shoot it. Shop it.

Introducing SAMSUNG mall
The Mobile Storefront
#TheOne 活动指南
如何寻找专属你的唯一？

Step1
请选择男女分区，进入五个都市情景
挑选你的一“件”钟情

Step2
选满5件单品生成专属Lookbook并保存图片

Step3
将你的搭配图片发至Farfetch微信后台
或发布微博加上#TheOne#并@Farfetch
即有机会赢取价值$500的#TheOne基金
The importance of Shoppable UGC
#ZALORASTyleEdit

There's no better day to wear it your way

CLICK ON EACH LOOK TO FIND YOUR PERSONAL STYLE

Get the look

@cinddie

05 Jan 2018

TOPSHOP
Petite Bonjour Long Sleeve...
$45.90
NOW $21.90

Mango
Printed Message T-Shirt
$19.90
NOW $9.90
Your new store assistants.
Hi👋! Welcome to H&M on Kik

Let's get to know your style with a few quick questions! 😊

Do you want to see men's or women's clothing?

Great! Let's start.

Which do you prefer, 1 or 2?

Hi!

Coolie! What's your thoughts on these two?

Here's an outfit with a jeans. How do you feel about this?

Men's

Great, let's get started!

Which of the following best describes you?

FYI if you like something, tap on the item 👍 to shop it!

Awesome! Would you like to shop this, share it or save it? 😊
ViSenze Shopping Bot

Hi there Rajroshan Sawhney. I'm ViSenze Shopbot. Send me a picture of what you are looking for and I'll see what I can find for you!

Yes! I just got these!

5 results
Based on your photo.

- $99.99
- $149.95
- $119.99
- $269

Type a message...
Your new checkout counter.
세상에서 가장 편안한 신발
호주산 천연이리노 올 100%

suggest style through image search

JACK & JILL

Jack & Jill / JACK & NICE Two kinds of dome... 18,710 KRW

Kuru / Kuru 3cm mesh style sneaker ... 45,120 KRW

0289 4.0cm Women's sneakers Women's fas... 62,710 KRW
Your new trial room.
SEPHORA
VIRTUAL ARTIST
Recap

• The future of Shopping is inside your pocket
• A.I makes it possible to replicate the mall experience
• Visual Search to Buy what you see
• UGC is the new storefront to inspire consumers
• Chat bots are your new store assistants
• Personalized recommendations to make you buy more
• Virtual Try-ons replace your Trial room experience
Questions?

vasanth@visenze.com
Over USD27 Billion invested in Retail Technology

- Real-time product targeting
- Visual Search & Image Recognition
- Conversational Commerce
- Sizing & Styling
- O2O Analytics
- Location-based Marketing & Analytics
- Predictive Merchandizing
- Natural language
- Self-Analytics
- Multi-channel marketing
How big is the market for Artificial Intelligence in Retail?

Artificial Intelligence in Retail Market is Worth ~ USD 5 billion by 2022

Growing at CAGR 38.3% from 2017 (approx ~ USD1 billion in 2017)

Machine Learning technology has largest market share of growth

Fastest CAGR growth in the visual search segment

Source:
Artificial Intelligence in Retail Market by Type MarketsandMarkets™, Oct 2017

* ViSenze profiled as the leading independent AI visual search provider in report.
AI is heavily used by Retail Marketers today

<table>
<thead>
<tr>
<th>Ways in Which Retail Marketers in North America and the UK Currently Use Artificial Intelligence (AI) to Accomplish Their Goals, Jan 2017</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search</td>
<td>37%</td>
</tr>
<tr>
<td>Recommendation engines for products/content</td>
<td>33%</td>
</tr>
<tr>
<td>Data science</td>
<td>26%</td>
</tr>
<tr>
<td>Programmatic advertising</td>
<td>26%</td>
</tr>
<tr>
<td>Marketing forecasting</td>
<td>14%</td>
</tr>
<tr>
<td>Chatbots</td>
<td>13%</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
</tr>
</tbody>
</table>

Note: among respondents who use AI for marketing purposes

- Over 70% of retailers use A.I. to solve problems in Search, Personalization and Recommendation.
- 1 in 4 retailers are using A.I. to process and understand data, including visual data.
The Race for Machine Intelligence

Some Challenges

- Data vs Privacy
- Data bias
- Converged world
- Consumer Experience
- Supply Chain monitoring
- Legacy systems
- Return-on-Investment

Cognitive Analytics
Cause something to happen.

Prescriptive Analytics
What should we do?

Predictive Analytics
What could happen?

Diagnostic Analytics
Why did it happen?

Descriptive Analytics
What happened?

AI Augmentation

Manual

Automated
Outline

• Artificial Intelligence in Retail
• Rise of Visual Content
• Innovations powered by Image Recognition
• Some challenges today
Client ROI Metrics

- 50% higher conversions on image search over text based search
- 50% higher CTR of shoppers who click on visually similar products
- 5x higher conversion rates for shoppers clicking on visually similar products
- 160% increase in engagement for shoppers who used find similar

using A.I. powered visual search and recognition solutions to improve engagement and conversions

* All metrics are averaged
CONTENT

DATA

TECHNOLOGY

COMMERCE
Adidas just launched a new shopping app that learns what you like

- **New app focused on personalization**
- **Personalized digital interaction:**
  - Learns product preferences and offer suggestions
  - A personalized newsfeed
  - AI chatbot to field customer enquiries
- **Over 60% of traffic from mobile**

A screenshot from the chat function of the app. Adidas
The Visual Web

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IDC White Paper
Image Recognition AI Applied in Retail Today

Search by Image
A Snap to Buy experience; user uploads an image to an App/site to search through a product catalogue without keywords

Visually Similar Recommendations
A Visual Browse experience; upsell and cross-sell on PLP and PDP with “You may also like” or “Out of Stock Alternatives”

Shoppable UGC & Visual Analytics
A UGC Moderation tool and analytics for publishers, brands and retailers through real-time moderation, tagging, visual search, and intelligence

Shopping Lens
An embedded visual search engine; interactive visual commerce experiences on smartphone cameras, chat IMs and content lifestyle apps
AI powered Visual Search moving into mainstream ecommerce

**BIG CORPORATIONS**
- Pinterest
- Google
- Amazon
- eBay

**SMALLER BRANDS + RETAILERS**
- Zalando
- Tommy Hilfiger
- Neiman Marcus
- Macy’s
- ASOS
- Target
- Wayfair

**Using ViSenze’:**
- Rakuten
- Uniqlo
- ASOS
- H&M
- LaRedoute
- Adidas
- Zalora
- Dafiti
- Flipkart/Myntra
- Mitsui
- Media24/Naspers
- JD.com (ID)
- Secoo
- Al Tayer
Samsung Mall - Capturing Shopping Interest Anytime, Anywhere for Anyone

- Samsung Mall available on Samsung smartphones in India
- AI Powered Image Search for Products
- Shop direct from the Camera or Photo Gallery

"The intent of Bixby Vision is that you can point your camera at any object – but it has got nothing to do with shopping,"

... when it comes to actually finding you the best deal, Bixby can and will leave you asking for more. This is because Bixby lacks the granular control, vis-à-vis shopping, that Samsung Mall brings to the table.

Sanjay Razdan, director, Samsung India
Major players are also driving this shift

- Amazon Visual Search
- Pinterest Lens
- Samsung Bixby Vision
- Google Lens
Transforming the camera lens into Product Shopping Lens

Using computer vision and trained on deep neural networks
Original User Generated Content is Driving More Engagement

- 51% of US shoppers trust UGC than website content
- 84% of Millennials and 70% of Baby Boomers admit that UGC influences what they buy.
Brands using UGC to Drive Interest and Engagement

Art of the Trench @ Burberry

#3stripesstyle @ Adidas
China ecommerce is already BIG on social media content

FARFETCH:

• UGC campaign on WeChat
• Mix-and-match clothes to create looks.
• Over 8,000 clicks to purchase in 1st week alone
How can retailers and brands leverage powerful neural networks combined with computer vision to **Curate, Moderate, Tag and Showcase** Products in inspiring UGC content?
ATTRIBUTE BASED NEURAL NET FOR RETAIL

AI powered image recognition for product and image tagging

Image URL → Call ViSenze API → ViSenze identifies attributes → Returns identified attributes
Custom neural networks training specifically for Fashion Wear
Identifying and tagging product images with searchable terms

Category: Blouse
Neckline: Shirt collar
Color: Blue
Pattern: Solid
Sleeve length: three quarter

Category: pants
Fit: skinny
Color: black
Pattern: solid

Category: coat
Closure type: button
Length: long
Style: straight
Color: green
Pattern: solid

Category: jeans
Fit: straight
Color: blue
Pattern: solid