ARTIFICIAL INTELLIGENCE AND THE FUTURE OF CONTENT:
A GUIDE FOR MARKETERS

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IT'S TIME FOR MARKETERS TO TAKE AI TO HEART

AI-POWERED TECHNOLOGIES CAN DRIVE MARKETING PERFORMANCE AND TRANSFORM YOUR RESULTS.

Imagine software performing the bulk of these activities:

▶ Planning blog topics

▶ Writing, optimizing, personalizing, and automating content

▶ Testing landing pages

▶ Scheduling social shares

▶ Reviewing analytics

▶ Defining content strategies

Your team's role would evolve to one that enhances content rather than creating it from scratch. How much more could you achieve?

Paul Roetzer, creator of the **Marketing Artificial Intelligence** Institute, wants to find out.

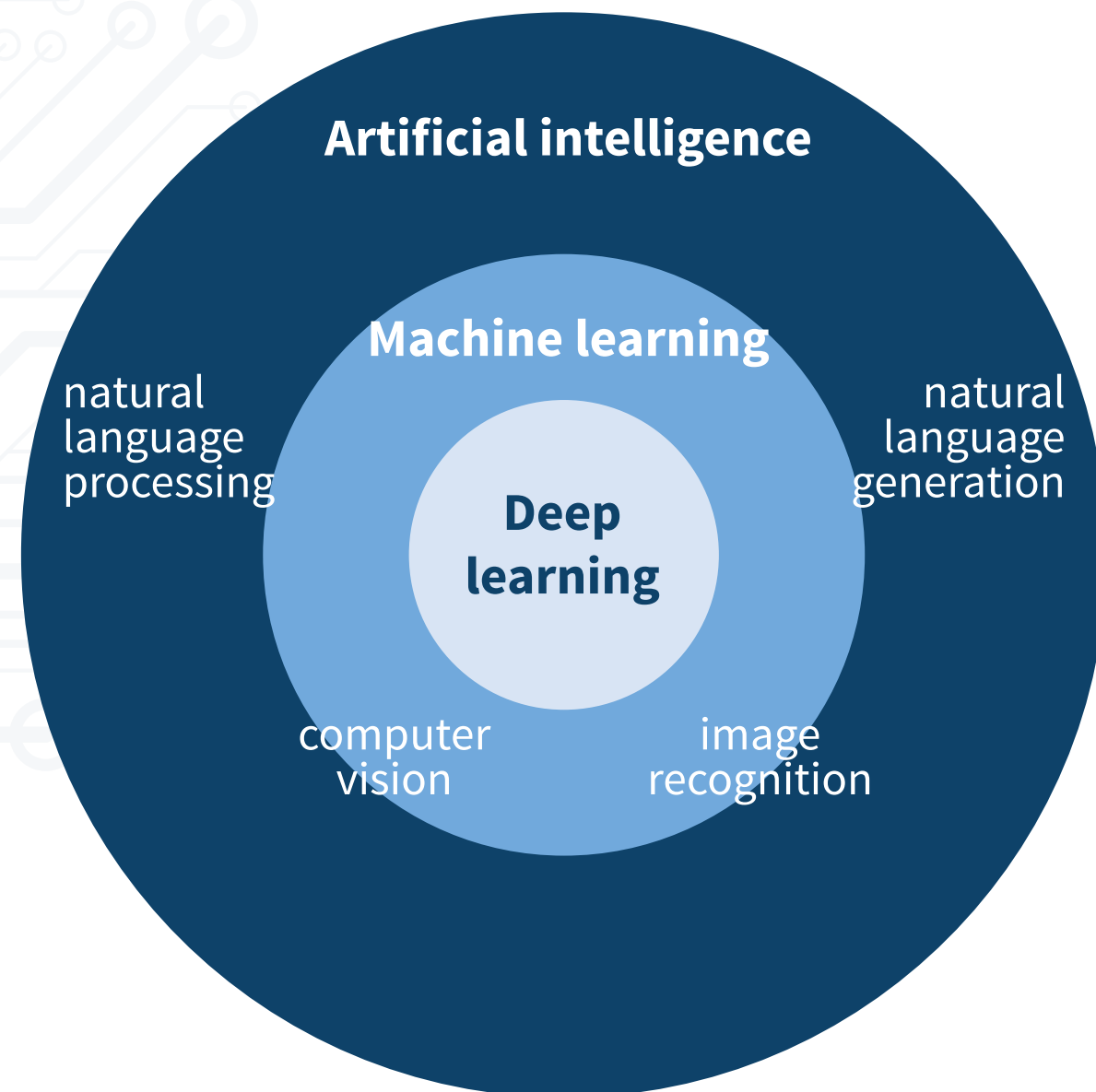**AI's implications in content marketing are immense.**

This e-book draws from the research Paul and his team have done and his generosity in sharing findings with Content Marketing Institute audiences. Quotations and images come from Paul's talks at **Content Marketing World** and the **Intelligent Content Conference**.

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WHAT IS ARTIFICIAL INTELLIGENCE?

Artificial intelligence encompasses technologies and processes that augment human knowledge and capabilities. Demis Hassabis, co-founder and CEO of Google DeepMind, defines AI as the "science of making machines smart."

AI concepts include:
▶ Machine learning
▶ Deep learning
▶ Image recognition
▶ Natural-language generation
▶ Computer vision
▶ Cognitive computing

Artificial intelligence

Machine learning

natural language processing

natural language generation

Deep learning

computer vision

image recognition

Image source

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AI IS EVERYWHERE

Artificial intelligence use is widespread among companies we interact with daily.

▶ **Netflix** employs AI to recommend shows.

▶ **Amazon** uses it to power Alexa and create personalized online experiences for shoppers.

▶ **UPS** applies it to determine optimal delivery paths for its 55,000 daily routes around the world.

▶ **Tesla** powers its Autopilot autonomous-driving feature with deep learning.

▶ **Facebook** uses image recognition to identify faces in photos and machine learning to filter news feeds.

▶ **Google's RankBrain** algorithm drives search results.

▶ **Apple** uses natural-language processing to recognize questions and provide answers with Siri.
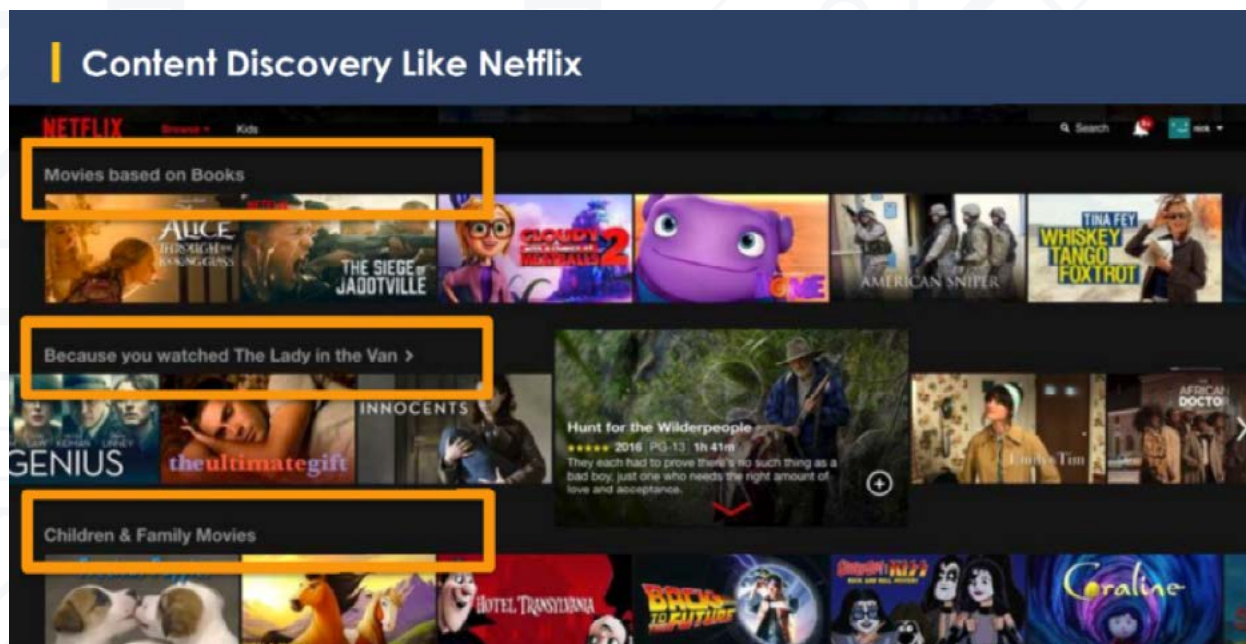
This screenshot – from Nick Edouard's Intelligent Content Conference talk on **bingeable content** – shows artificial intelligence in action.

AI technology behind the scenes enables Netflix to recommend shows in a way that can seem as if it's reading viewers' minds.

AI IN CONTENT MARKETING

AI is powered by data and algorithms that enable machines to learn and evolve on their own. In traditional software, humans write algorithms or sets of instructions that tell a machine what to do.

For example, in marketing automation software a marketer may set up a three-part email campaign that's triggered when someone downloads an e-book.

But, what if there are 10,000 e-book downloads across five personas, originating from multiple channels (social, paid, organic, direct) that require personalized emails and website experiences based on user history?
No human brain is wired to solve that challenge.

AI excels in tackling complex, data-driven problems with a computer-supported solution.

Humans have a finite ability to process all that data, build intelligent strategies, create content at scale, and apply insights to maximize performance.

Artificial intelligence, in contrast, has unlimited potential to:
▶ Discover insights
▶ Deliver predictions
▶ Make strategic recommendations
▶ Create certain kinds of content better, faster, and cheaper

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3 THINGS TO KNOW ABOUT AI TODAY

AI's potential lies in enhancing marketing capabilities and performance. As the technology advances, artificial intelligence will become more prevalent in every software product we use.

Here are three insights to start you down the path to AI enlightenment:

▶ **It's early.** Despite tremendous advances in AI capabilities, most marketing solutions are still narrow in application and require human time and guidance to deliver the value promised.

▶ **Artificial intelligence requires massive amounts of data** (structured and unstructured) and customized solutions. Large enterprises are therefore more likely to see short-term benefits from AI investments.

▶ **AI technology is becoming more affordable and accessible.** As Facebook, Google, Microsoft, Amazon, IBM, and others open up their AI technology, more businesses will explore the possibilities. The challenge will be finding technical talent capable of building and executing AI solutions.

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AI: RESISTANCE IS FUTILE

No one yet knows the full impact AI will have within marketing. Inevitably, some jobs will disappear and others will emerge.

Your work will be disrupted. So, yes, beware. But don't panic. Paul suggests looking at the situation this way:
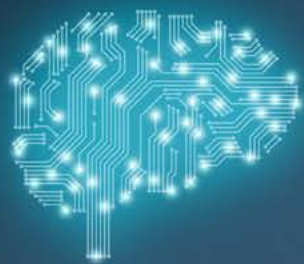
For the foreseeable future, humans are uniquely capable of creative, emotion-based functions. If it's a task that is data-driven or can be executed by defining a set of rules, a machine will eventually outperform humans at it. All it takes is for someone to have the vision, desire, ability, and funding to build it.

–Paul Roetzer, Marketing Artificial Intelligence Institute

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HOW TO GET STARTED

If you take away only one thing from this e-book, let it be Paul's mantra: "Try it." If you take away two things, let the second be: "Don't wait."

What can content marketers do to get started today?

▶ **Look for repetitive, manual marketing tasks that could be intelligently automated**. Research the AI capabilities of your existing marketing technology stack and explore the potential of new AI solutions dedicated to specific content marketing needs.

▶ **Assess opportunities to get more out of your data.** Discover insights, predict outcomes, devise strategies, personalize content across channels, and tell stories at scale. Consider the free version of IBM Watson Analytics as a gateway to begin exploring data in new ways.

▶ **Practice constant learning.** Be deliberate in your efforts to consume articles, blog posts, podcasts, presentations, reports, and books on the topic.

Quick-start tip: Pick a use case (a task that eats up a lot of time or an administrative or tactical thing your team hates to do). Find a tool that can enhance what you do in that area. Get a basic understanding of what's possible.

If you pick a couple of tools and start doing some of these things, no one's going to understand what you're doing. It'll be magic to people in your company. It can be your competitive advantage.

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THE AI FRAMEWORK FOR CONTENT MARKETING

Take the initiative to look for ways machines can help marketers do what machines do best, and keep doing the things humans do best.

This 5-point framework outlines ways marketers might take advantage of AI today and in the future.

PLANNING

PRODUCTION

PERSONALIZATION

PROMOTION

PERFORMANCE

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THE AI FRAMEWORK FOR CONTENT MARKETING:
PLANNING

This category relates to marketing activities like predicting consumer behaviors, defining strategies, prioritizing activities, and determining allocation of resources.

AI-driven topic clusters

One example of AI-supported planning is HubSpot's ability to build topic clusters (as shown right), which gives content teams a way to discover topics they might want to write more about.


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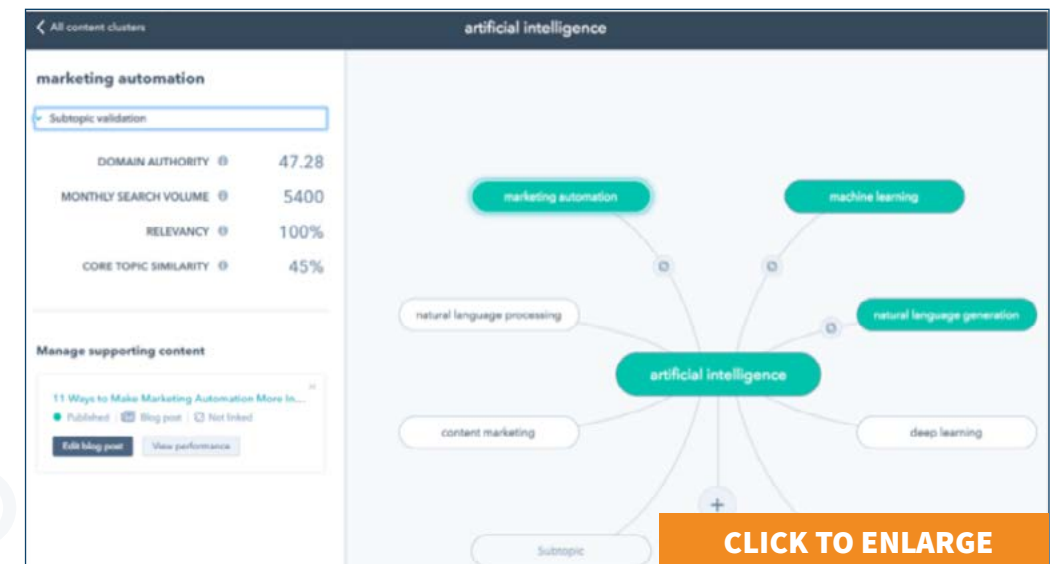
*Image source
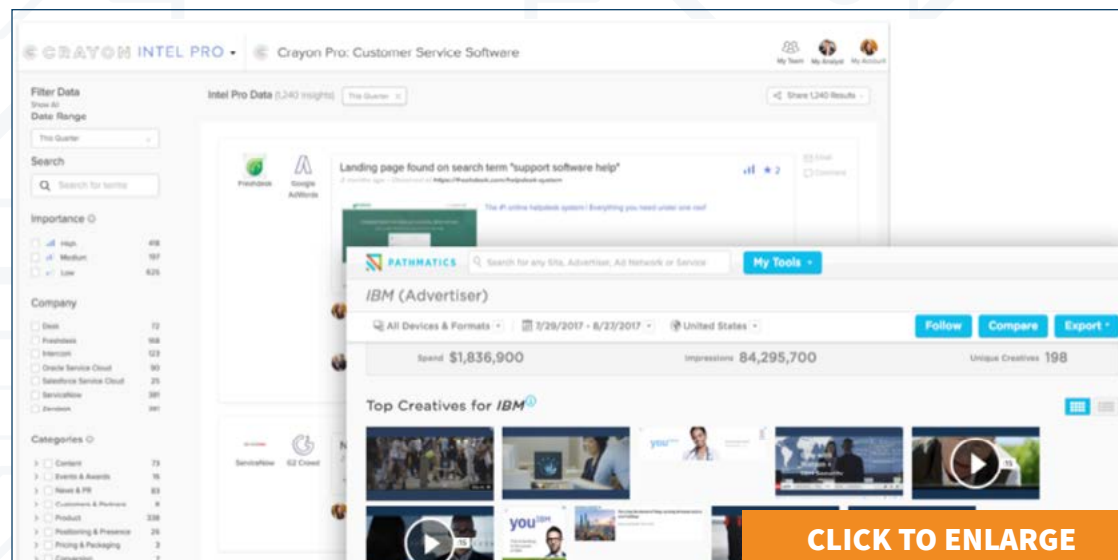
AI-driven competitive analysis

You can support your planning by using tools like **Crayon** and **Pathmatics** (shown left), which enable you to monitor the digital footprint of your competitors, giving you information to use when forming your content marketing strategy.

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AI-driven content analysis

Marketing planning often involves analyzing content as a basis for making decisions about future content. One free AI tool anyone can use for this purpose is **IBM Watson Analytics**. You import any dataset –a CSV file, for example – and explore it.

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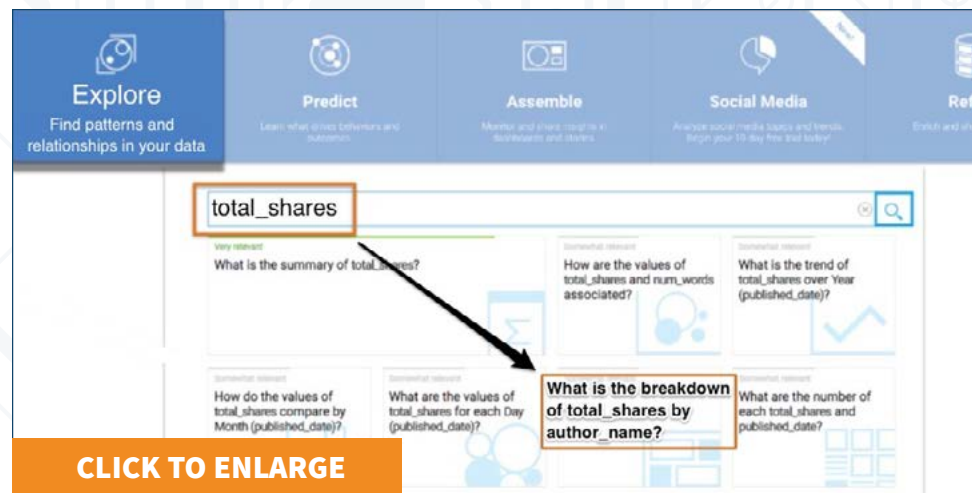
Paul used **BuzzSumo** to export analytics data from the previous 12 months on CMI's website: titles, URLs, total shares, word count, etc. He hit export, cleaned up the spreadsheet, and imported it into IBM Watson Analytics.

When he typed in "total_shares," Watson Analytics came up with a set of questions it predicted people might want to ask (shown left).

From the set of generated questions, Paul picked, "What is the breakdown of total_shares by author_name?" – a question he hadn't even considered asking.

Instantly, Watson Analytics delivered the breakdown in a stunningly simple visual: a bunch of blue boxes, one per author, packed into a big rectangle in order of the number of times that author's CMI posts have been shared in the past year (shown right).

Tools like BuzzSumo and Watson Analytics can help content marketers increase their insight into questions like:

CLICK TO ENLARGE

▶ How are your authors performing?
▶ How do your articles perform based on word count?
▶ How does your content perform within specific channels?
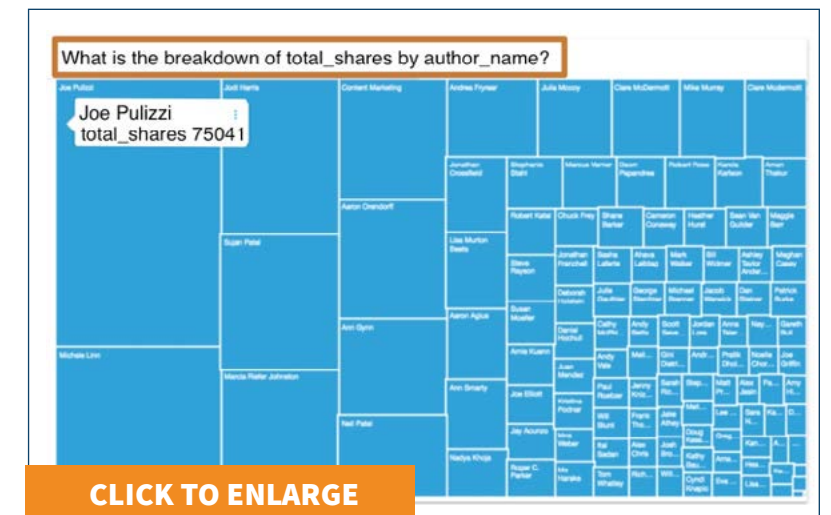
Use code **ICC100** to save $100 on an Intelligent Content Conference pass.

THE AI FRAMEWORK FOR CONTENT MARKETING:
PRODUCTION

This category relates to creating, curating, and optimizing content, including blog posts, emails, landing pages, videos, and advertisements.

AI-driven content curation

AI-based tools can help marketers surface the right content to share across a network or to enhance a blog. You may even be using a curation tool – **Curata** or **Scoop.it**, for example – and not realize you're using AI.


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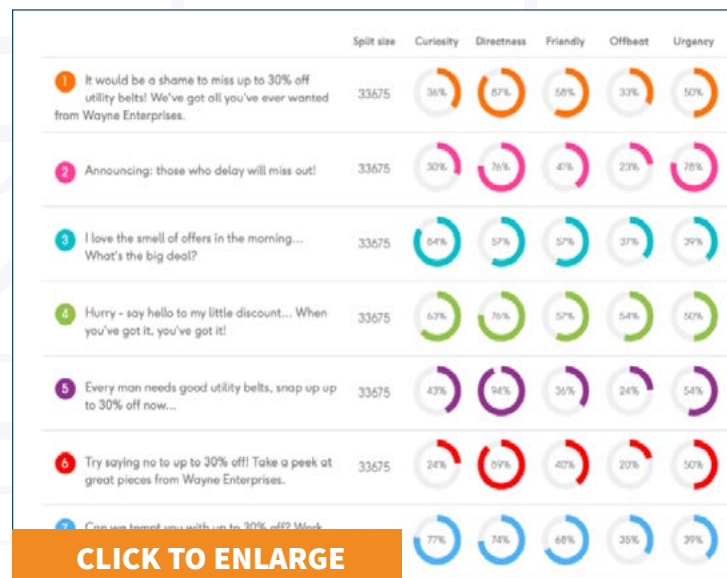
Image source

AI-driven email subject-line recommendations

Phrasee uses AI to create email subject lines that can result in more opens, clicks, and conversions than subject lines written by people. The software uses AI to evaluate email content and recommend 10 subject lines based on scores (as shown left) indicating how each is likely to perform.

Tip: Use A/B testing to compare how machine-generated subject lines perform against your own subject lines.
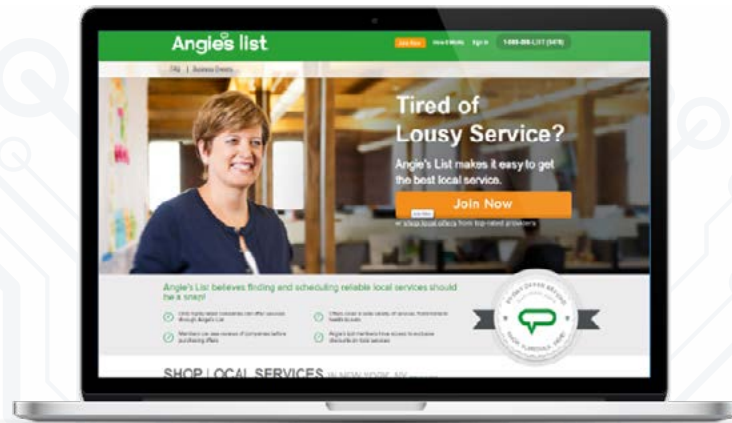
Persado delivers AI-generated language for email subject lines and social ads designed to resonate with target audiences and segments. In a sign of its success, Persado counts dozens of top companies on its roster, including Neiman Marcus, Angie's List, Expedia, Zipcar, and Verizon.

AI-driven text analysis

Tools that analyze text for grammar, sentiment, style, and tone of voice include **Acrolinx**, **Grammarly**, and **Atomic Reach**.

Acrolinx, which has been doing this kind of AI for enterprise companies since 2004, offers software that integrates into authoring tools and can assess content in multiple languages against organization-specific guidelines.

Image source

AI-driven content creation

Data-intensive content (based on financial information, analytics, product information, etc.) lends itself to automation. A human creates a template, and machines do all the rest at scale, spitting out updates as often as you please. While fill-in-the-blanks automation isn't AI – the computer isn't learning as it goes – Paul includes it in his AI talk as a step in that direction.
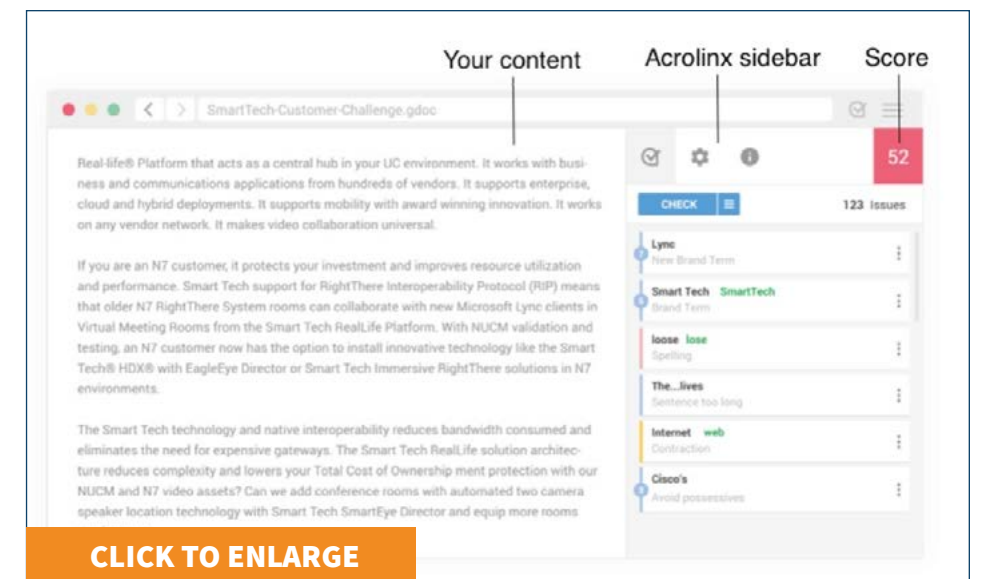
Here's an example of this type of natural-language generation (NLG) as executed using Automated Insights' **Wordsmith**, which companies in over 50 industries used to generate over 1.5 billion "NLG-powered narratives"– reports, articles, etc. – last year.

It's like a Mad Libs® exercise without the "mad." A number here, a noun there … voilà! Natural-sounding sentences and paragraphs.

CLICK TO ENLARGE

Image source

CLICK TO ENLARGE

AI-driven content creation on Edmunds.com

Car-shopping website Edmunds uses Automated Insights' software to continuously update content on its website, where thousands of pages of detailed vehicle profiles are written based on manufacturer data.

AI-driven content creation on Homesnap

Real-estate website Homesnap uses Wordsmith to automatically generate daily and weekly market reports, as well as real-time updates to individual property descriptions.

CLICK TO ENLARGE

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AI-driven image recognition and auto-tagging

In a tool like **Clarifai**, an algorithm assesses images and tells how likely each image is to be one type of thing or another.

Apparel	
PREDICTED CONCEPT	PROBABILITY
Turtleneck	0.979
Bodysuit	0.699
T-Shirt	0.503
Blouse	0.498
Cardigan	0.474
Dress	0.465
Polos	0.434
Tube Top	0.374

TRY YOUR OWN IMAGE OR VIDEO
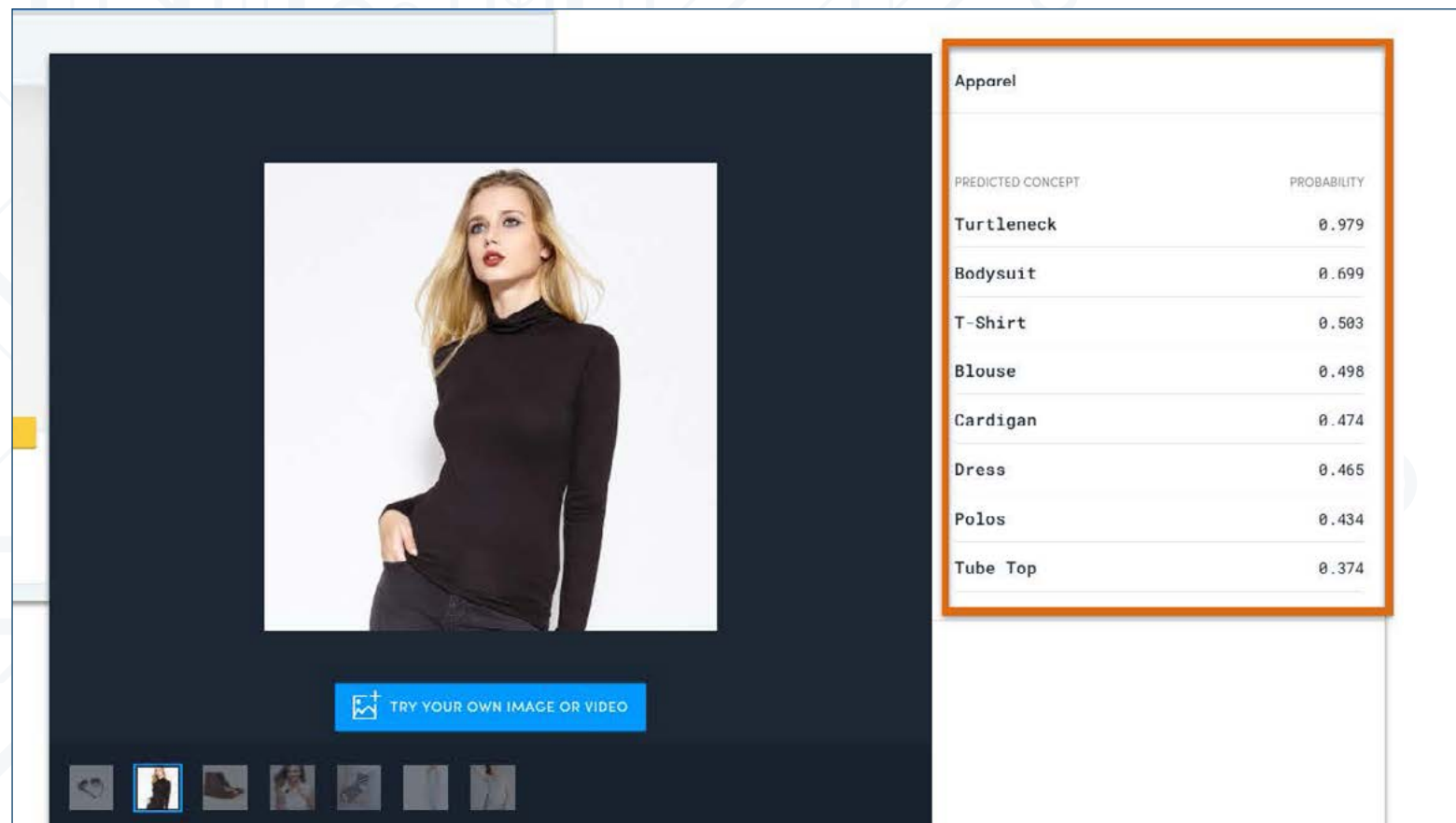
Image source

The example on the left shows that Clarifai is 97.9% sure that the image is of a turtleneck. As humans work in the background to confirm or correct the machine's guesses, the machine gets more accurate.

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THE AI FRAMEWORK FOR CONTENT MARKETING: PERSONALIZATION

Personalization refers to the one-to-one tailoring of people's experiences through intelligently automated content, such as emails, product recommendations, web content, and augmented-reality and virtual-reality experiences.
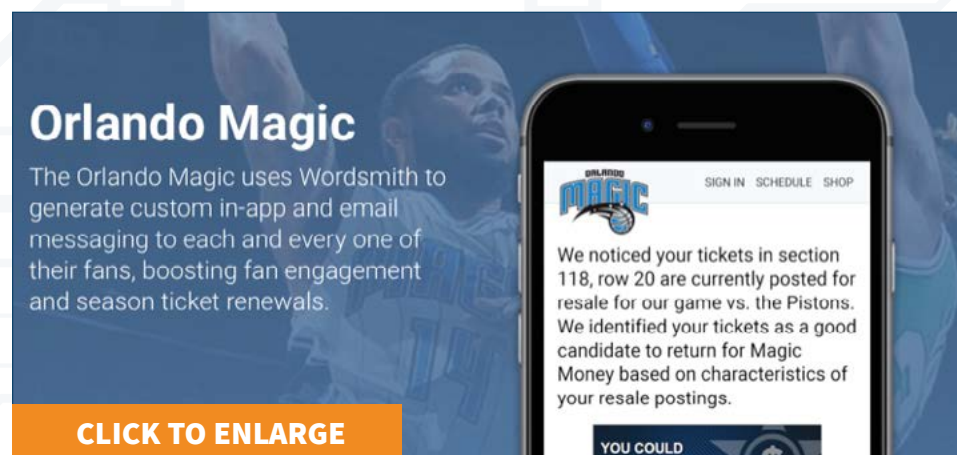
Personalized content doesn't always qualify as AI. Still, personalization sometimes contains elements of AI, with the algorithm getting smarter on its own.

AI-driven personalization

The NBA basketball team Orlando Magic personalizes emails to season-ticket holders using **Wordsmith** from Automated Insights. The example below shows an email created and sent without human involvement (beyond setting up the rules).

Orlando Magic

The Orlando Magic uses Wordsmith to generate custom in-app and email messaging to each and every one of their fans, boosting fan engagement and season ticket renewals.

CLICK TO ENLARGE

SIGN IN   SCHEDULE   SHOP

We noticed your tickets in section 118, row 20 are currently posted for resale for our game vs. the Pistons. We identified your tickets as a good candidate to return for Magic Money based on characteristics of your resale postings.

YOU COULD

*Image source

The message essentially says, "Your tickets aren't going to sell tonight. You can either waste them or trade them in for Magic Money."

These personalized emails are "boosting fan engagement and season ticket renewals," Paul says.

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More AI-driven personalization tools

Boomtrain uses machine learning and predictive algorithms to drive increased clicks, engagement, and revenue through customer communication. This software helps companies serve content that's most likely to engage an individual reader, and delivers it through multiple channels in real time. Its customers – including Forbes, CBS, Chow.com, The Onion – are primarily in the publishing, travel, and e-commerce verticals.

OneSpot software personalizes content across digital channels for brands like L'Oréal, IBM, Whole Foods Market, and Delta Faucet. Nestlé serves up hyper-personalized content for readers in real time using OneSpot. The tool feeds intelligence back to Nestlé about how users interact with the content to support rapid-fire decision-making about marketing spend and editorial focus.

Skyword also uses artificial intelligence in its Skyword Personalized Recommendations engine, which delivers personalized on-site and email content recommendations for generating increased engagement and conversions.

Uberflip uses natural-language processing to automatically extract features and topics from client content. The company uses that data to power a machine-learning engine that recommends content to visitors based on their intent and the content they've already consumed.

RELATED:
Skyword Employs Artificial Intelligence to Hyper-Personalize Enterprise Content

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THE AI FRAMEWORK FOR CONTENT MARKETING: PROMOTION

Promotion involves managing cross-channel and cross-device initiatives to drive engagement and actions, including audience targeting, social publishing, and management of digital paid media.

AI-driven social media decisions

Cortex, for example, makes recommendations for content headed for social media. The software, according to a company video, helps marketers create the images, text, and videos that "inspire consumers to take action," yielding a 40% to 500% increase in marketing results while saving an average of 8.5 hours per week.

Cortex suggests colors, hashtags, keywords, image types, and publication dates and times. You can set it up to make these choices automatically.

CLICK TO ENLARGE

Image source

AI-driven content recommendations for visitors

OneSpot also helps with promotion. The tool uses AI to recommend content for new and returning visitors, remarket content across displays and social media, and drive new users from third-party sites to your content.

AI-driven content-promotion recommendations

Scoop.it uses artificial intelligence to automate content distribution across channels and identify the content that generates the most engagement. The result is smart promotion of content that resonates most.

AI-driven targeting and decision-making

Albert uses predictive analytics "to execute on data-driven actions, and deep-learning technology to act effortlessly on unpredictable situations that would traditionally require decision-making and reasoning by a human marketer," explains Or Shani, CEO of Albert.

Harley-Davidson NYC uses Albert software to optimize its ad spend in New York City. The software helps the brand isolate and target a narrow audience in a crowded market across channels
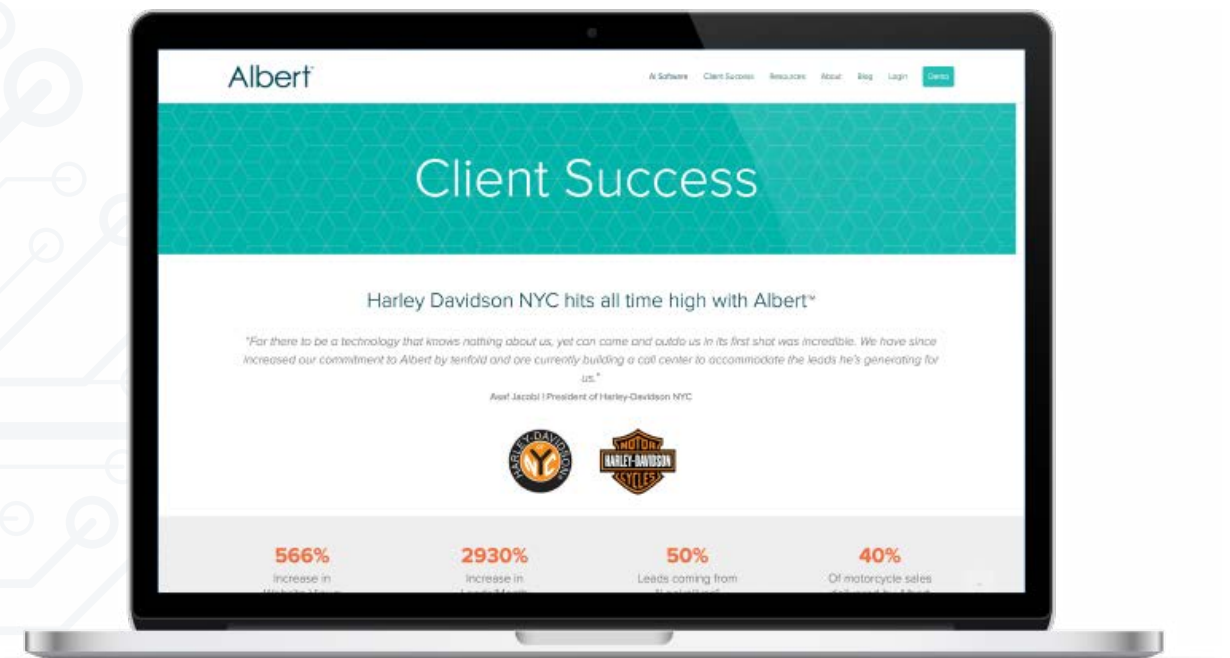
THE AI FRAMEWORK FOR CONTENT MARKETING:
PERFORMANCE

In the AI framework, performance relates to marketing activities like turning data into intelligence through automated narratives and insights and then using that intelligence to optimize performance.
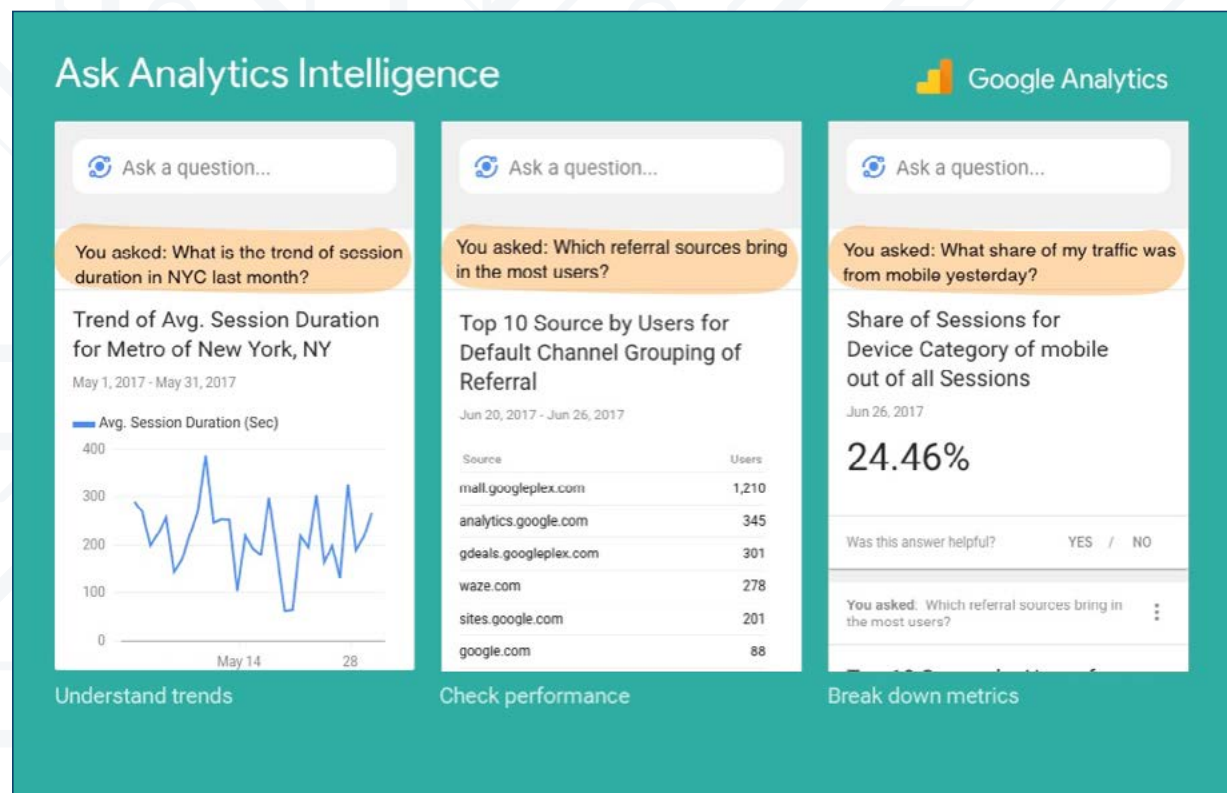
Image source

Paul predicts the tools will get smarter faster, especially since Google has jumped in with its recent release of **Google Analytics Solutions**.

If you have a list of questions you want answered every month, you can set up this tool to ask Google those questions (as shown left) instead of asking a data analyst.

Although companies like Google are working to enable AI to turn data into intelligence and intelligence into action, we're not there yet, Paul says.

WHAT'S NEXT FOR YOU?

AI technology for marketing may be young, but it's evolving fast. The time to start is now.

One great resource for continuing education is Paul's **Marketing AI Institute**. The Institute is a content hub that explores the current and future potential of AI, machine learning, deep learning, and cognitive computing to transform marketing. Subscribers receive exclusive interviews with AI experts and vendors, as well as actionable information on how to apply AI in their businesses.

Featured Expert

Paul Roetzer is founder and CEO of **PR 20/20**, a Cleveland-based content marketing agency and HubSpot's first Agency Partner. He is author of The Marketing Performance Blueprint (Wiley, 2014) and The Marketing Agency Blueprint (Wiley, 2012); creator of the **Marketing Artificial Intelligence Institute** and **Marketing Score**; and a frequent speaker on marketing AI, talent, technology, and strategy. Follow him on Twitter **@PaulRoetzer**.

This e-book draws from the following blog posts:

▶ **Cognitive Content Marketing: The Path to a More (Artificially) Intelligent Future**

▶ **Scale Your B2B Content With Artificial Intelligence: Ideas and Tools Marketers Can Try**

▶ **The 5P's of Marketing Artificial Intelligence**

Please note: All tools included are suggested by contributors. No post can list all relevant tools in the space. Feel free to suggest additional tools in the comments sections of the posts that make up this e-book.

About Content Marketing Institute (CMI)

Content Marketing Institute is the leading global content marketing education and training organization, teaching enterprise brands how to attract and retain customers through compelling, multichannel storytelling. CMI's **Content Marketing World** event, the largest content marketing-focused event, is held every September in Cleveland, Ohio, USA, and the **Intelligent Content Conference** event is held every spring. CMI publishes the bi-monthly magazine *Chief Content Officer*, and provides strategic consulting and content marketing research for some of the best-known brands in the world. Watch this **video** to learn more about CMI. To view all research and subscribe to our emails, visit **www.contentmarketinginstitute.com**.

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