AWS for Publishers

Scale your business with the most purpose-built capabilities and partner solutions of any cloud

Pablo Mancini

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AWS for Publishers

Content creators, business executives and engineering teams are innovating on top of AWS cloud-based services and solutions

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Trends & News Consumption Patterns 2022

Trust in the news

42% say they trust most news most of the time. Interest in news has fallen across markets, from 63% in 2017 to 51% in 2022.

Consumption of TV & Print

Consumption of traditional media declined further in the last year in almost all markets

Paying for online news

Across a basket of 20 countries where payment is widespread, 17% paid for any online news.

Subscriber acquisition

Persuading younger people to pay remains a critical issue for industry, with the average age of a digital news subscriber almost 50.

The power of brands

A large proportion of digital subscriptions go to just a few big national brands.

Subscription Economy

Subscribers are rethinking the number of media subscriptions they can afford this year – which include news, television, music, and books.

First Party Data

32% say they trust news websites to use their personal data. The figure is even lower in the United States (18%) and France (19%).

Getting the news

23% prefer to start their news journeys with a website or app, down nine points since 2018.
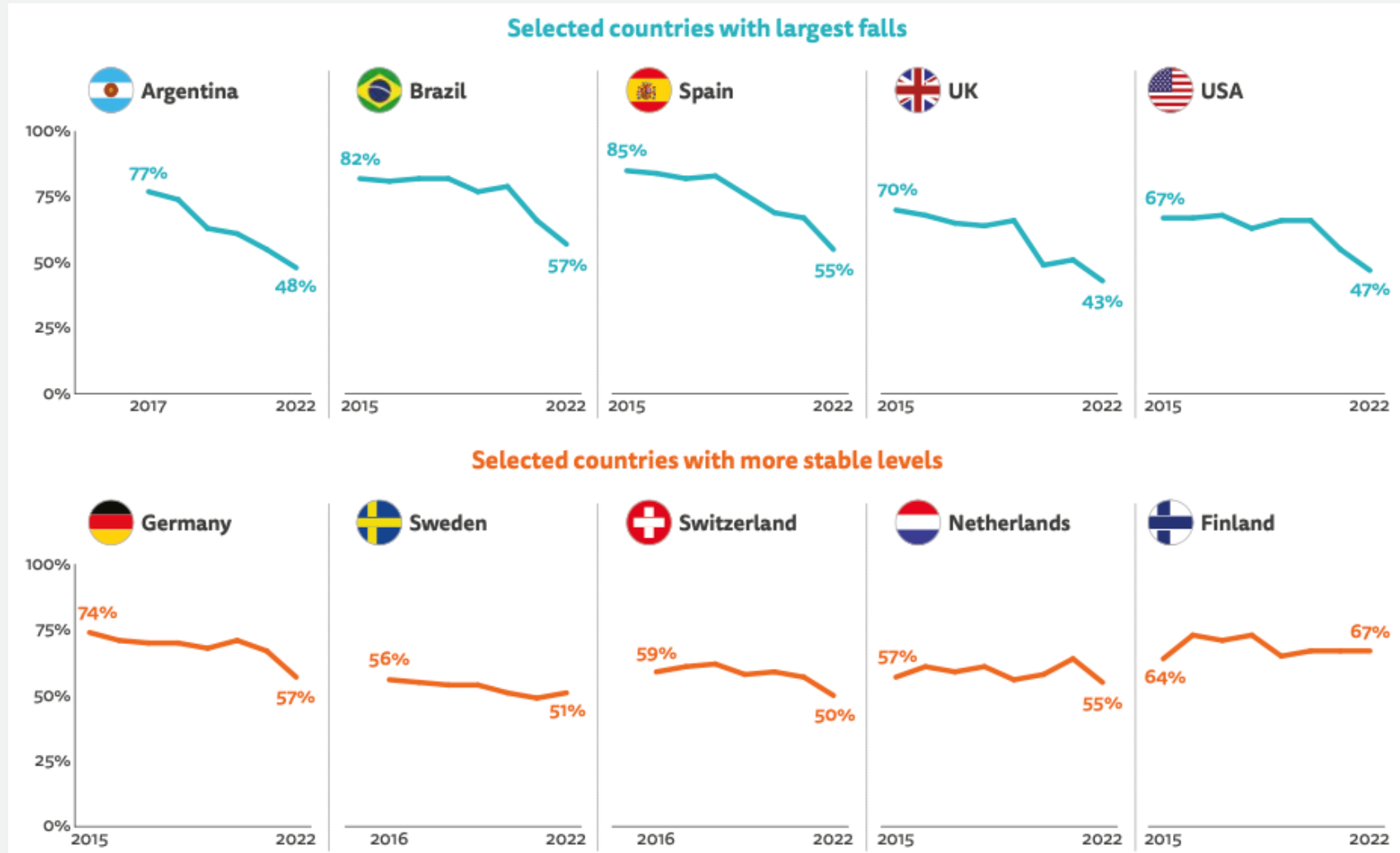
Mobile

The smartphone has become the dominant way in which most people first access news in the morning,

Social

Facebook remains the most-used social network. TikTok has become the fastest growing network

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Source: Digital News Report- Reuters Institute, 2022

Proportion who are very or extremely interested in news

Selected countries with largest falls

Argentina — 77% (2017) → 48% (2022)
Brazil — 82% (2015) → 57% (2022)
Spain — 85% (2015) → 55% (2022)
UK — 70% (2015) → 43% (2022)
USA — 67% (2015) → 47% (2022)

Selected countries with more stable levels

Germany — 74% (2015) → 57% (2022)
Sweden — 56% (2016) → 51% (2022)
Switzerland — 59% (2016) → 50% (2022)
Netherlands — 57% (2015) → 55% (2022)
Finland — 64% (2015) → 67% (2022)

Source: Digital News Report- Reuters Institute, 2022

Publishing Business Acceleration

Adopting AWS capabilities and partner solutions, publishing companies are reinventing how they create & distribute content, deliver powerful digital experiences and scale their revenue.

Content Monetization

Drive business transformation through ads performance, identity management and resolution, predictive paywalls, automate offers for customer retention and customer data platforms.

Content Management

Focus on content, workflows efficiencies and UX, not infrastructure. Centralize content storage, processing, creation, and distribution operations from the ground to the cloud. Workloads automation.

Analytics & AI/ML

ML & AI to segment audiences, forecast inventory, perform analysis, product page optimization, improve monetization, mitigate churn, and create personalized experiences and recommendations.

AWS Solutions Library

A collection of cloud-based solutions for dozens of technical and business problems, vetted for you by AWS

One-click launch

Launch a **fully-tested solution starter kit** in your AWS account with **one click**

Accelerate revenue

Get started with your project quickly and start **monetizing your content**

Well-architected

Rely on the architecture as it reflects **AWS best practices**

Agility

Save the resources developing a solution from the beginning

Expand and add

Use the framework and available guides to **expand the solution starter kit** based on your needs

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AWS Publishing Partners Community

More than 500 AWS Partners

Solution Areas

The most purpose-built capabilities and partner solutions to drive revenue and increase efficiency

CONTENT MANAGEMENT

- SEO & Performance
- CMS
- Digital Media Asset Management
- Audio for publishing
- Video for publishing
- Content Distribution and Syndication
- Live Event Management System
- Content Quality

CONTENT MONETIZATION

- Identity Management
- First Party Data Wall
- Subscription Management & Paywall
- Predictive revenue
- Data Enrichment
- Customer Data Platforms
- CRM Solutions

ANALYTICS & AI ML

- Audience Insights and analytics
- AB Testing to improve User Engagement
- User propensity scores and retention
- Reduce friction and churn
- Automate offers
- Automate content creation
- Auto-tagging legacy content
- Copyright Protection

Data science & analytics

Examples of AWS solution-specific services

Analytics Services

Machine Learning Services

Database Services

Examples of AWS Solutions

AWS Media Insights Engine

Media Intelligence

Predictive User Engagement

aws partner network

epam

GRAYMETA

VERITONE.

30+ more

Customers

Formula 1

The Guardian

nielsen

Second Spectrum

aws.amazon.com/media/data-science-analytics

Why personalization is so important

- **60%** of consumers say they will be repeat customers after a personalized experience

- Organizations that implement personalization realize a **10-15% lift in revenue**

- It can cost **5 times** more to gain a new customer than to retain an existing customer

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Moving the needle on business outcomes

The power of personalization used to solve today's challenges

ACQUISITION & RETENTION

Enhance the entire customer journey

Cultivate a captive audience in a crowded digital environment

ENGAGEMENT

Understand, measure, and improve user experiences

Increase time spent engaging with products and content

EFFICIENCIES & REVENUE

Scale in a cost-effective manner to react to peak periods
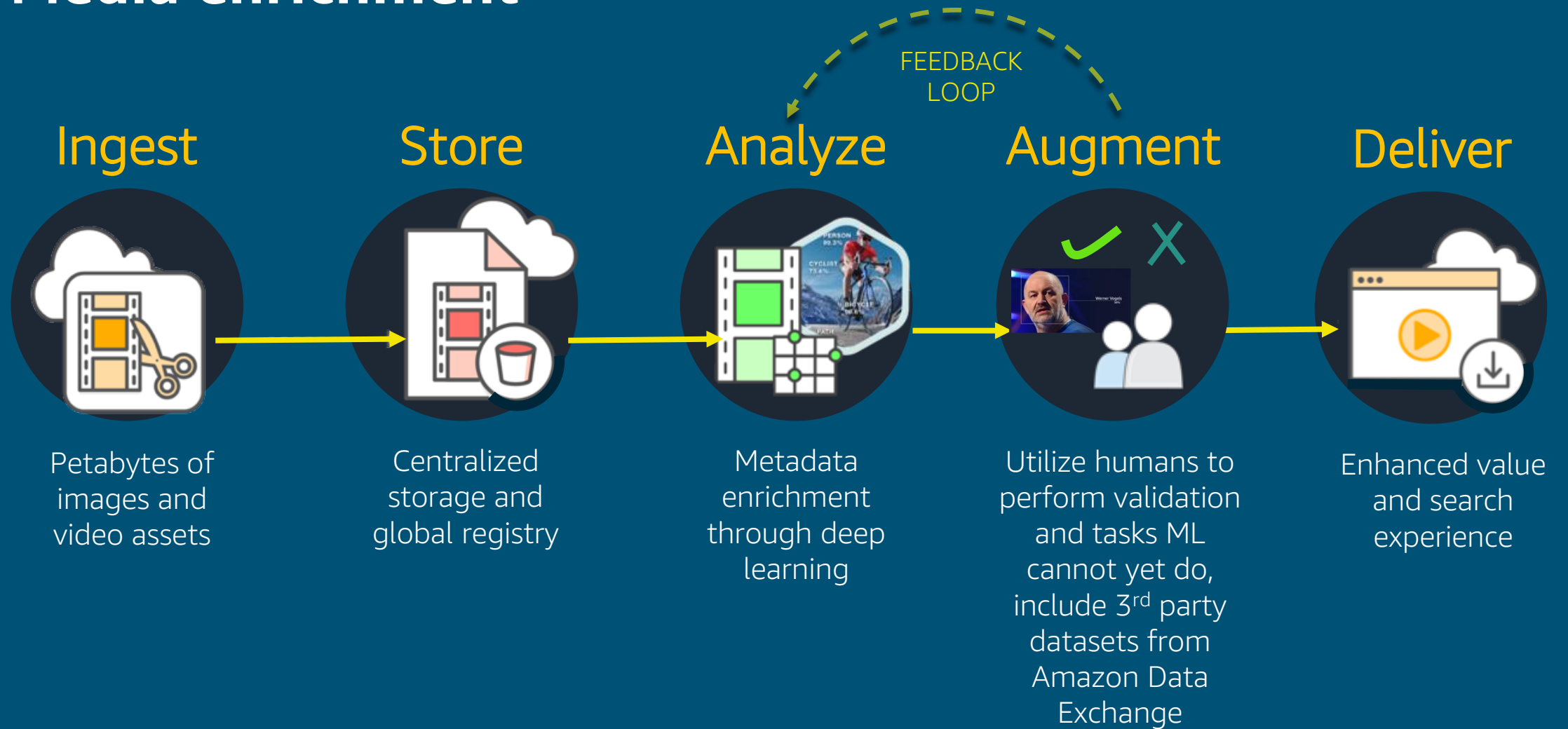
Increase average revenue per user and improve marketing efficiencies

DISCOVERABILITY

Help customers find what they want quickly

Highlight new products, content, and promotion offerings

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Media enrichment

FEEDBACK
LOOP

Ingest

Petabytes of images and video assets

Store

Centralized storage and global registry

Analyze

Metadata enrichment through deep learning

Augment

Utilize humans to perform validation and tasks ML cannot yet do, include 3rd party datasets from Amazon Data Exchange

Deliver

Enhanced value and search experience

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Use cases enabled by metadata extraction

Level of effort

Low

| search & discoverability | ▶ | Automate the creation of rich metadata, extracted from audio visual content, integrated into asset management systems |

| content moderation | ▶ | Detect potentially inappropriate content to avoid issues in global markets, and to increase brand safety for advertisers |

Can be accomplished fairly easily with AI services

Medium

| subtitling & localization | ▶ | Automate the creation of subtitles, captions, transcription and translations of audio content |

| compliance & redaction | ▶ | Detect and pixelate faces captured incidentally to preserve the privacy of non-persons of interest in news feeds and security footage |

| contextual advertising | ▶ | Make advertising relevant to the context of the content. Avoid brand damage through unintended associations |

| content categorization | ▶ | Categorize media based on the content of the video |

Requires additional processing of output of AI services and/or custom model creation

High

| highlight generation | ▶ | Identify actors/ players, detect specific activities (goal, foul, car crash…) and automatically create a clipping around the detected scenes |

| content summarization | ▶ | Create descriptions of what is happening in content for descriptive audio, short form summary etc. |

Requires advanced ML model creation

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PROBLEM

FOX was using a legacy system to personalize user content but wanted to pioneer a new, cloud-native solution that could provide a dynamic, curated customer experience across their digital properties.

SOLUTION

Amazon Personalize recommends videos, articles, and relevant marketing information based on user or content trends across all FOX properties allowing for a curated experience that puts the customer first.

IMPACT

The service suggests content more accurately to customers with early analyses indicating a **6% lift in average minutes viewed** per recommendation and a **15% reduction in bounce rate** compared to legacy system.

Improving recommendations through digital transformation

FOX

Publishing Business Acceleration

Work as one team with our industry experts, solutions architects and partners network to innovate and scale your business

DISCOVERY

- Timeline & Roles
- High Level Business Goals
- Problems to Solve
- Priority Use Cases
- Current Solutions Diagram + RFP

SOLUTIONS

- Solutions and Services Recommendations
- Product Demos
- Deep Dive Sessions & Solutions Diagrams
- Proposal & Business case
- POC

KICKOFF

- Statement of work
- Execution
- Launch!

Publishing Case Studies

Move faster, smarter and more efficiently with AWS

"All-in approach" as a cornerstone of transformation and innovation

Challenges

- The publishing industry is changing rapidly, and Ringier Axel Springer (RAS) management wanted to be able to innovate and deliver products faster
- Management realized their private cloud can't compete with services offered by public cloud and wanted to refocus their developers to create digital products that drive the company revenue

Solution

- RAS is migrating their 'private cloud' of applications constituting 80% of the company business to the AWS cloud. These applications are being re-platformed with some architecture redesign enabling RAS to realize cost benefit right after migration to the cloud
- The migration has started in September 2018

Benefits

- By using market standard solutions from AWS, Ring Publishing digital publishing platform is more reliable, accessible & attractive to clients
- The migration allowed RAS to free resources from infrastructure investments, tap into new fields of development and focus on critical topics like AI/ML
- Media brands of RAS were able to develop new features and stay flexible, even during the migration process and during COVID-19 crisis

"

Media today is not only a media game, it is a tech game and unless you are really very familiar with the big trends like AI, ML, you will not get the potential you need in order to make your business successful in the future. **We went with AWS "all-in"** and plan to migrate all our content services and big data stack to the AWS environment within 3 years and **already in the first 9 months we see significant progress.**

"

Mark Dekan, CEO

Headquarters: Switzerland, presence across Central and Eastern Europe (CEE)

Website: https://www.ringieraxelspringer.com/

About RAS

Ringier Axel Springer (RAS) is a leading digital media company in CEE, a joint venture between Swiss Ringier AG and German Axel Springer SE, created in order to combine their international operations in CEE.

RAS manages an extensive portfolio of more than 200 digital and print products in the expanding markets of Poland, Hungary, Slovakia, Serbia, Estonia, Lithuania and Latvia. Additionally, RAS has many on-line services VOD, classifieds, news, price comparison, e-commerce, and more.

Ring Publishing is an all-in-one digital publishing platform, helping media brands face challenges of the digital era.

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ringier axel springer   ring publishing

ML aiding journalists in their reporting

Challenges

- The Washington Post wanted to improve the work of their journalists by providing them with tools to break news faster

- In order to break news, their reporters need not just the words but also the structured data that is found in newsworthy documents

Solution

- The customer decided to use **Amazon Textract** in order to equip their journalists with machine learning data extraction capabilities, enabling them to study records of public interest faster and to break news based on insights from the words and structured data of newsworthy documents

Benefits

- Amazon Textract reveals more data from documents, more accurately, aiding their journalists in their reporting

- Machine learning for document understanding is now a critical tool for The Washington Post to study records of public interest

The Washington Post

Headquarters: USA

Website:
https://www.washingtonpost.com/

About Washington Post

The Washington Post is an American daily newspaper published in Washington, D.C. It is the most widely circulated newspaper within the Washington metropolitan area. Daily broadsheet editions are printed for the District of Columbia, Maryland, and Virginia. The newspaper has won 69 Pulitzer Prizes.

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Automated content creation using AI

NIKKEI

Challenges

- Nikkei was using journalists and news editors to write basic summaries of earnings releases. They were looking for a way to accelerate article publication and reallocate talent to more value-add financial journalism

Solution

- Nikkei developed their proprietary AI algorithm running on EC2 to automatically create financial summaries based on earnings releases

Benefits

- Nikkei is able to publish financial summaries in 1–2 minutes versus hours using human journalists

- AWS allows the customer to scale during peak times, especially during quarterly earnings season

- Nikkei's financial journalists are freed to focus on publishing value-added articles

Headquarters: Japan

Website: http://www.nikkei.co.jp/nikkeiinfo/en/

About Nikkei

Nikkei is a media organization focused on financial news. Their flagship daily newspaper, The Nikkei, has approximately three million subscribers.

Nikkei's multi-platform media distribution includes online, broadcast and magazines.

PDF

XBRL

AWS
Machine Learning

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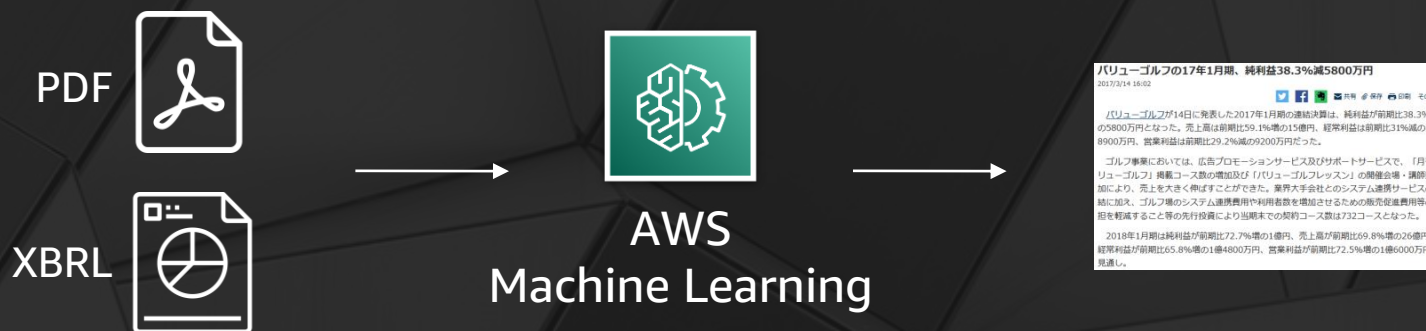
Predicting revenue with ML

Challenges

- News Corp Australia for digital content, they have to determine which articles reside inside of a paywall, and which are publicly available

- The customer wanted to deploy a solution to help make its decisions around which article should go behind the paywall

Solution

- The customer decided to use TensorFlow on Amazon SageMaker to predict the number of incremental subscriptions a news story will generate

Benefits

- The solution helps the customer determine which news stories live behind a pay wall

- NewCorp is working on deploying the model in production and expects the model will enable editorial content producers to optimize the headline copy, the section where a story is placed, and other factors to maximize net new subscriptions generated for the business

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Headquarters: Australia

Website:
https://www.newscorpaustralia.com/

About News Corp Australia

News Corp Australia is Australia's number one media company, distributing news and information across a suite of digital and traditional print products.

News Corp Australia owns approximately 142 daily, Sunday, weekly, bi-weekly and tri-weekly newspapers, of which 102 are suburban publications (including 16 in which News Corp Australia has a 50% interest).

Personalized images

NATIONAL GEOGRAPHIC

Challenges

NatGeo wanted to provide access to multimedia content catalog going back to 1880s but needed to make content accessible and discoverable. The immense volume of data was stored in CMSs on multiple continents, in different formats and lacked sufficient metadata to surface images the way they envisioned.

Solution

To build National Geographic App, they used serverless technologies from AWS to store files in S3, normalize data for Amazon CloudSearch, and AWS Lambda to trigger code-based events like invoking Amazon Rekognition to automate metadata tagging for images and updating index entries on Dynamo DB.

Benefits

- Reduced development time by months

- Ability to add new features quickly

- Allows NatGeo team to focus on experimentation, testing, and innovation

Headquarters: USA

Website:
https://www.nationalgeographicpartners.com/

About National Geographic Partners

National Geographic Partners (NGP), a joint venture between National Geographic and Walt Disney Company, provides premium science, adventure, and exploration content across a huge portfolio of media assets, including magazine publications and television channels.

"Using AWS serverless computing reduced development time by months and enabled us to quickly add features that would otherwise have been out of scope. **Without Amazon Rekognition, for example, it would have been challenging to serve images based on user preferences, a key part of the user experience**."

— Nik Khilnani, Senior Director of Platform Development, National Geographic Partners

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AI-powered graph database helps users visualize connections

Challenges

- Journalists and data scientists at The Globe and Mail needed to be able to quickly understand connections among millions of records to aid in investigative journalism and bring additional value to readers

Solution

With the AWS Digital Innovation program the team learned how to work backwards from their customer, and developed an AI-powered graph database that connects the dots across people, events, organizations, etc. to help journalists see relationships that otherwise may not be apparent. It also enables readers to examine the data behind the stories – adding a level of transparency that had never been possible.

Benefits

- Reduced project development time by 4 years
- Increased staff productivity
- Improved customer experience

Headquarters: Canada

Website: www.theglobeandmail.com/

About The Globe and Mail

The Globe and Mail is Canada's foremost news media company, reaching more than 6 million readers across print and digital every week.

> The solution changes the [social] contract we have with our readers, and has a huge potential to change journalism. The biggest takeaway from the entire program is the idea that anything is possible. Where I would have spent five years persuading the team internally that we needed to create an entirely new data structure… it was done in under a year.
>
> Editor-in-Chief David Walmsley

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Usage analytics solution

Challenges

- Thomson Reuters decided to build a solution that would enable it to capture, analyze, and visualize analytics data generated by its offerings, providing insights to help product teams continuously improve the user experience

- The customer wanted to build their own solution to manage costs

Solution

- The analytics solution built by Thomson Reuters—called Product Insight—relies on a number of AWS services, such as Amazon Kinesis Streams, Amazon Kinesis Firehose, AWS Lambda serverless compute, Amazon S3, AWS Lambda, AWS Identity and Access Management

Benefits

- Product Insight launched two months ahead of schedule

- The solution can process more than more than 25 billion events per month

- Because Product Insight requires minimal administration, engineers can spend their time working with product teams to add business value rather than managing infrastructure

Headquarters: USA

Website:
https://www.thomsonreuters.com/en.html

About Thomson Reuters

Thomson Reuters is a leading source of information—including one of the world's most trusted news organizations—for the world's businesses and professionals.

It provides companies with the intelligence, technology, and human expertise they need to find trusted answers, enabling them to make better decisions more quickly. Its customers include financial, risk, legal, tax, accounting, and media markets.

"Our initial goal was to accommodate 2,000 events per second. "Our tests show that Product Insight on AWS can process up to 4,000 events per second, and within a year we expect to increase that to more than 10,000 events per second. Because of the robust failover architecture and the technical capabilities of AWS, we have not lost a single event since we started collecting data.

—Anders Fritz, Senior Manager of Product Innovation at Thomson Reuters "

The Wall Street Journal Empowers Readers with Search Tool Using Amazon Kendra

Challenges

- As the 2020 US presidential election approached, The Wall Street Journal (WSJ) wanted to empower readers to more easily access and understand what candidates said, as well as candidates' positions on topics that matter to readers.

- A June 5, 2019, Pew Research Center study found that almost 80 percent of Americans say they have checked the facts in news stories themselves to find the original source of information.

Solution

- The WSJ's Product and Technology team turned to Amazon Web Services (AWS) to build a new customer experience.

- Through collaboration with a global team of experts from the AWS Digital Innovation program and AWS Professional Services, a global team of experts that can help businesses realize their desired outcomes on AWS, the WSJ team was able to accelerate the development of Talk2020, an intelligent search tool that helps readers quickly search and analyze 30 years of public statements made by presidential candidates.

Benefits

- Launched Talk2020 search tool in 5 months

- Created a search tool with natural language processing

- Increased engagement

Headquarters: USA

Website: https://www.wsj.com/

About The WSJ
Founded in 1889 and owned by Dow Jones & Company, The Wall Street Journal is a New York–based global news organization focusing on business, finance, economics, and global forces. It engages readers across print, digital, mobile, social, audio, and video platforms. Winner of over three dozen Pulitzer Prizes, The Wall Street Journal's circulation is in the millions.

" AWS helped us build a solution that met our timelines. Having that direct access to experts enabled us to put the right services around Amazon Kendra and deliver the level of quality that we wanted. "

— Dion Bailey, Head of WSJ Technology and Architecture

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DOW JONES

Auto-tagging Photos with Machine Learning

Aller

Challenges

- Aller Group recognized that in order to increase reuse or sell their photo inventory, they had to significantly improve tagging of the photos

- The customer was looking for a quick and cost-efficient way to auto-tag 13 million photos that they have in their current inventory

- Manual work would require approximately 44 FTE to fulfil the task

Solution

- Aller, who have several mission critical applications hosted on AWS, decided to use AWS Rekognition for images tagging (i.e. person detection, scene and activity keywords, etc.)

- AWS Comprehend was used for user comments (sentiment) and Reuters Open Calais was used for articles (keywords, concepts)

Benefits

- Photo-tagging was successful and has led to a reduction in tagging costs from € 3.85 per image to € 0.12 per image

- The new solution runs 24/7 and allows for continuous improvements and multi-lingual tagging

- Aller was also able to easily experiment with different thresholds for facial comparison

- The customer has since decided to also extend the tagging to their video inventory

Headquarters: Denmark

Employees: 2.2K

Website: www.aller.dk

About Aller

Aller Group is the leading magazine publisher in the Nordic countries, headquartered in Copenhagen, Denmark. It publishes among other Elle, Cafe, Familie Journalen, Femina, Allers and Se og Hør.

Today, Aller is the leading publisher of magazines and newspapers in the Nordic Region with a weekly circulation of 3.2 million copies.

> "Using AWS Rekognition completely changed the way we see how Machine Learning can be implemented. The speed with which the PoC ran and the low costs associated with the overall solution has led us to reconsider several other projects that earlier had been seen as unrealistic."

- Thomas Culmsee
Business Relationship Manager and Head of Editorial Production

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Recirculation of trending content with Data Analytics

HEARST

Challenges

- Needed to develop a platform that analyzed real-time clickstream events such as readership statistics, impressions, and page views for more than 300 global websites and apps.In addition, the publisher wanted to monetise the text-to-speech feature

Solution

- Hearst has partnered with AWS and Built a clickstream analytics platform that transmits and processes more than 30 terabytes of clickstream data a day, streamed from more than 300 Hearst websites worldwide

- Amazon Kinesis Firehose automatically moves buffered data from Amazon Kinesis Data Streams into persistent storage on Amazon Simple Storage Service (Amazon S3)

Benefits

- Fast insights - With the clickstream analytics platform, Hearst can make the entire data stream – from website click to aggregated data - available to editors in minutes
- Increased content recirculation - with the ability to get content metrics quickly, Hearst editors have increased the recirculation of trending content by more than 25 percent
- Reduced complexity
- Simplified data analysis

Headquarters: USA

Website:

https://www.hearst.com/

About Hearst

Hearst Corporation, headquartered in New York City, is one of the largest media and information companies in the world.

Some of the newspapers and magazines owned by them include Elle, Marie Claire, Cosmopolitan or San Francisco Chronicle.

" I don't know how we could have made our clickstream data pipeline work without Amazon Kinesis services "

Peter Jaffe, Data Scientist

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Monetization of text-to-speech/Polly feature

Challenges	Solution	Benefits
• McClatchy needed a solution to create audio versions of its articles • In addition, the publisher wanted to monetise the text-to-speech feature	• McClatchy partnered with AWS and AWS's partner, Trinity Audio, to generate audio versions of news articles within a matter of seconds • The solution was built using English-US Amazon Polly Neural-to-Text-to-Speech systems (NTTS) • The Trinity Audio technology inserts advertising, resulting in a new revenue-generating stream	• Prior to the newsrooms-wide launch, the AI-powered feature was tested by the Sacramento Bee and the News & Observer in Raleigh for three months; each observed an increase in user engagement online. **Time spent on each site increased by 168%, story page views went up 89% and visits per user increased by 95%.**

Headquarters: USA

Website: https://www.mcclatchy.com/

About McClatchy

McClatchy is an American publisher that operates 29 daily newspapers in fourteen states and has an average weekday circulation of 1.6 million and Sunday circulation of 2.4 million.

In addition to its daily newspapers, McClatchy also operates several websites and community papers, as well as a news agency, McClatchyDC, focused on political news from Washington, D.C

" At a time when consumption of digital audio is stronger than ever, we're excited to roll out this new audio feature to our customers to enhance their news experience and **give them the ability to listen to local journalism where and when they want it**. "

– Jessica Gilbert, Senior Director of Product and Experience

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Thank you!

Learn more about AWS for Media & Entertainment at **aws.amazon.com/media**

Pablo Mancini
pww@amazon.com