



Digital Business

Five Ways Media Companies Can Generate Value from AI

With some up-front thinking, tight alignment with business objectives, strong data hygiene and careful project governance, content organizations can move AI from the sideline to the business core and deliver on the lofty expectations set for this still-maturing technology.

Executive Summary

Media industry leaders have all heard the hype around AI – now they want to see results.

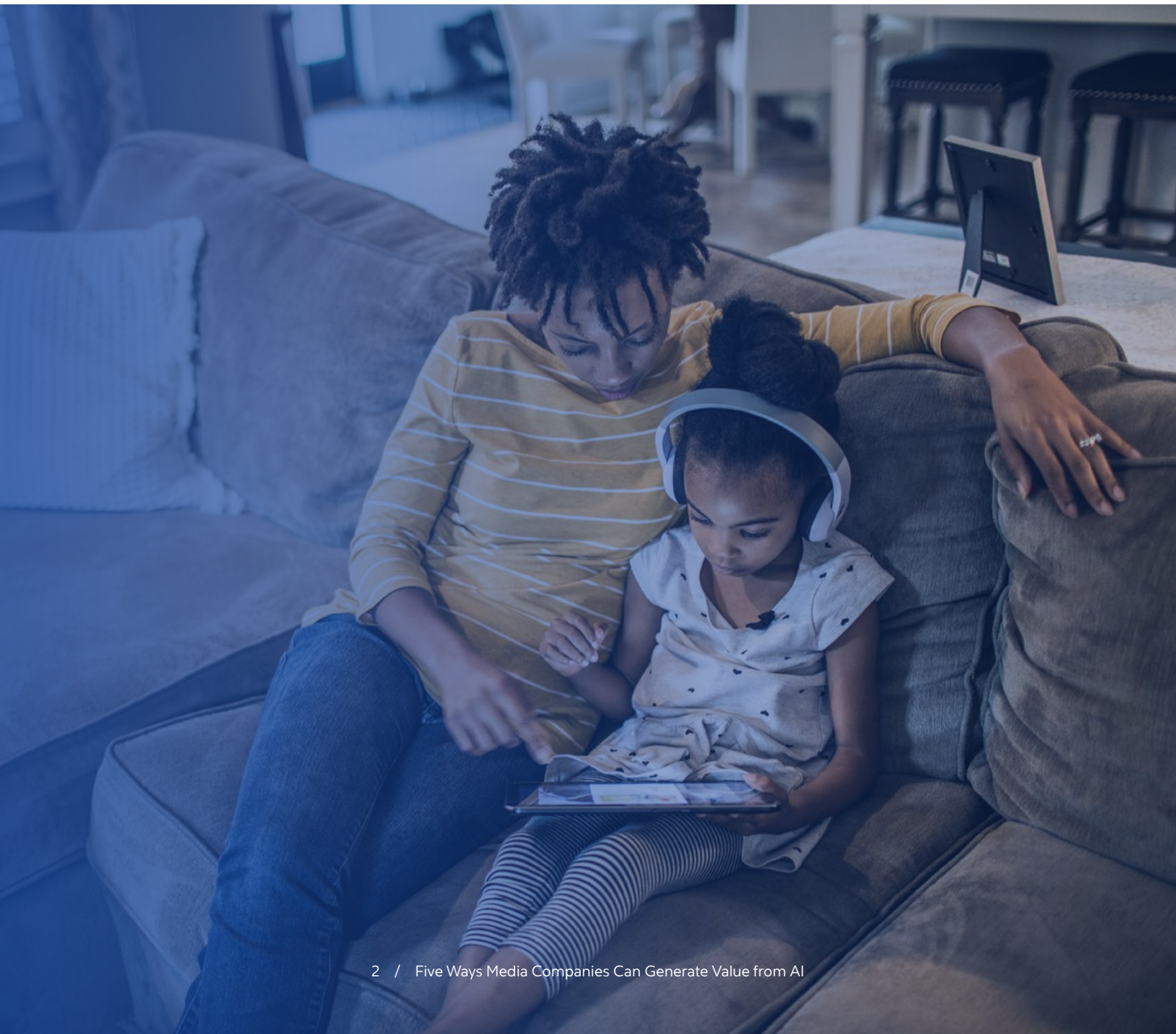
They know all about the need to reduce costs, create engaging consumer experiences and drive higher revenues. Artificial intelligence's (AI's) potential to help achieve all these goals – even amid the COVID-19 crisis – has been touted to the hilt across the media value chain, from acquisition and commissioning to pre- and post-production, through operations, distribution, commercial, marketing and customer service.

The convergence of data, technology and digital products is creating the fertile ground for AI initiatives to flourish. From a cost savings perspective, the technology has caught up sufficiently to enable media businesses to automate processes at scale. On the front end, over-the-top and direct-to-consumer services are generating more data than any business can possibly absorb and analyze; for example, Netflix generates more than two million events per second.¹ AI offers the possibility of harnessing and extracting meaning from data flows that surface new

insights, recommendations and strategies that would otherwise remain hidden – for example, identifying behaviors that customarily foreshadow customers churning, enabling media companies to deploy countermeasures or similar offers.

And while some media organizations have made great strides with AI – most famously Netflix, with some estimating that its AI engine alone is delivering

value in the billions² – progress is far from uniform. Most media businesses that are struggling to accelerate their productive adoption of AI are facing one or more of a number of barriers and challenges, from having the right data platforms and architectures, through driving business value. This white paper outlines the obstacles and offers recommendations for achieving greater returns from AI investments.



Barriers to progress

One common obstacle is data. As many media businesses have developed, organically and through M&A activity, data from different parts of the business has built up in discrete silos, restricting its availability across and between different functions and business units. This can be further compounded in media organizations as often their value chain includes platform partners like telcos and third-party streaming entities on the distribution side and many fragmented production and localization partners on the content supply front – each with differing levels of data maturity and capability. What’s more, different parts of the business – consumer offerings, marketing, operations, etc. – may also have completely different technology stacks.

The result: many business needs that could be fulfilled with the available data or technology within the organization are often unaddressed.

Quality of data can be an issue, too. Missing or inadequate metadata for content assets can make it hard to apply AI successfully. An organization’s approach to data science can also hamper progress. With many data scientists originating from academia rather than having a media business background, their instinct is to tackle large, complex problems with similarly large data sets, rather than trying to solve more manageable problems first (see “Media Leader Predicts Audience Size for Improved Monetization” on page 4).

As many media businesses have developed, organically and through M&A activity, data from different parts of the business has built up in discrete silos, restricting its availability across and between different functions and business units. This can be further compounded in media organizations as often their value chain includes platform partners like telcos and third-party streaming entities on the distribution side and many fragmented production and localization partners on the content supply front – each with differing levels of data maturity and capability.

Quick Take

Media Leader Predicts Audience Size for Improved Monetization

CHALLENGE

A large media company wanted to create a data science model that could help it predict audience size to support both monetization and schedule optimization.

SOLUTION

Using its own proprietary viewing history as well as public data sources such as audience-panel-based numbers provided by Nielsen, or Broadcasters Audience Research Board (BARB) in the UK, we created a model of prior viewing to help predict likely future trends. This single use case was able to support multiple phases of the value chain. Adding other variables such as demographics, weather, time of year, content on other channels, etc. can enrich the model to show how a wide range of factors influence outcomes.

OUTCOME

The client was able to forecast the performance of inventory with over 80% accuracy, enabling it to fine-tune campaign delivery. This reduced the workload of operations teams to conduct make-good campaigns that initially under-delivered. It also helped them to avoid costly inventory waste where campaign objectives can be met with less inventory.

When identifying AI use cases, it's important to start with the business problem the organization is trying to solve – such as reducing subscriber churn or cutting ad ops costs – rather than “What can Acme Inc.’s AI package do for us?”

AI's unique challenges

While media businesses are highly adept at deploying technology, AI projects are different since they involve more complex questions of ethics (i.e., avoiding bias). It's also much harder to predict success, as it is still a relatively young and extremely complex technology with vast numbers of variables.

For these reasons, AI projects require a unique approach and tight governance. Like any technology project, they must be driven by use cases that can deliver tangible savings, revenue growth or measurable gains toward strategic goals. But as success is harder to predict, businesses need to take a more experimental tack, potentially tackling many smaller problems, progressing incrementally, building on successes and learning from failures rather than diverting all resources to one large objective.

While such governance must be established to ensure AI is used ethically and will reflect the values of the organization, consider the case of training AI models with historical media content. AI is what it is trained on, and content from the past will not reflect the values of today, so careful human supervision is key to grappling with this dilemma. (For a deeper dive, read our white paper, [“Making AI Responsible and Effective.”](#))

Successful AI projects arise from close collaboration between business and technology, focused on addressing a specific and well-defined use case. When identifying AI use cases, it's important to start

with the business problem the organization is trying to solve – such as reducing subscriber churn or cutting ad ops costs – rather than “What can Acme Inc.’s AI package do for us?” This is why engagement from the business side is so critical for success.

Unlike many IT challenges, AI projects normally require more interaction with the business side and feature more interaction among disciplines throughout the lifecycle – from business case identification all the way to operationalization. Again, collaboration with business is a mandate, not a mere nice-to-have.

For example, we helped a large European media organization with advertisement impression prediction for better traffic monetization and improved advertiser experience. To conduct a proof of value, we engaged with the business to understand what “shift” in experience they expect their advertisers to achieve and the definition of “better” from a monetization perspective.

It was critical to understand these issues precisely in order to gauge the AI effort needed, which helped us determine the best techniques to apply, the time period of data to be used for algorithmic training, the features that needed to be created and, eventually, the cost to deliver the solution and the ROI.

Of course, finding use cases is not difficult – there are many possible candidates to choose from – but selecting the right ones is critical. Doing so

reduces the time it will take to complete a project, enhances the value it can deliver to business, cuts incurred costs and potentially increases revenue through improved customer experience. Unless the impact is substantial or radical, there might not be a business case for spending money on AI.

Here are five key moves that media businesses should consider when making those all-important use-case selections that will help ensure a successful AI initiative.

Five steps to AI success

1. Identify cases that can deliver value quickly and that you can build on incrementally.

ROI is important, but speed is critical. One common mistake that many organizations make in selecting the problem to solve with AI is to pick the most complex one – after all, the reasoning goes, AI is a tool for tackling complexities that the human mind can't get a handle on. But that doesn't necessarily yield the biggest or best payoff. There can be a far simpler problem which, if solved by bringing in AI-enabled automation or by leveraging an AI-enabled technique, can generate more value more rapidly. So it's always wise to choose problems based on envisioned value rather than to focus on complexity.

Return on investment must also play a role in decision-making. Under no circumstances should the cost of the solution exceed the value of the benefits, hence a fairly precise grasp of the expected ROI is extremely helpful.

One way to help select the right projects is to factor in a higher cost of capital in your ROI models, as this will emphasize those that deliver value earlier while also reflecting the higher level failure risk of AI projects vs. standard technology ones. With AI, business validation is needed to decide whether a given insight will be at all helpful or not. Hence, it is common that some projects are scrapped after a technically "successful" pilot or MVP, if business leaders cannot leverage the outcome in the way they want.

2. Always involve the business.

While this seems obvious, it bears emphasis: Staying connected with the business throughout the lifecycle of an initiative is essential. Trade-offs and decisions will be needed along the way. It is therefore critical to understand what the business needs to **achieve**, how important the problem is to them and, very importantly, how quickly they need it. Understanding all this and agreeing to the way forward will help to secure the necessary investment – and even increased funding if early results prove more promising than anticipated.

Managing expectations is crucial too. AI can never guarantee 100% automation or 100% accuracy. So, it is very important to understand what a tolerable margin of error is for the business, and how the business plans to resolve errors or exceptions. This understanding clarifies where, how and to what extent AI can help the business and where leaders might need a fall-back plan (See "A More Intelligent & Automated Way of Classifying Ads" on page 7).

3. Have the right data, at the right time, ready for analysis.

Any savings that an organization can gain by using AI can easily be eroded or lost by the costs incurred to feed the data into an AI engine. As AI's success is so heavily dependent on data, the data has to be the right quality, it must be **trustworthy**, and its inevitable biases must be well understood and mitigated so they don't undermine the organization. The right

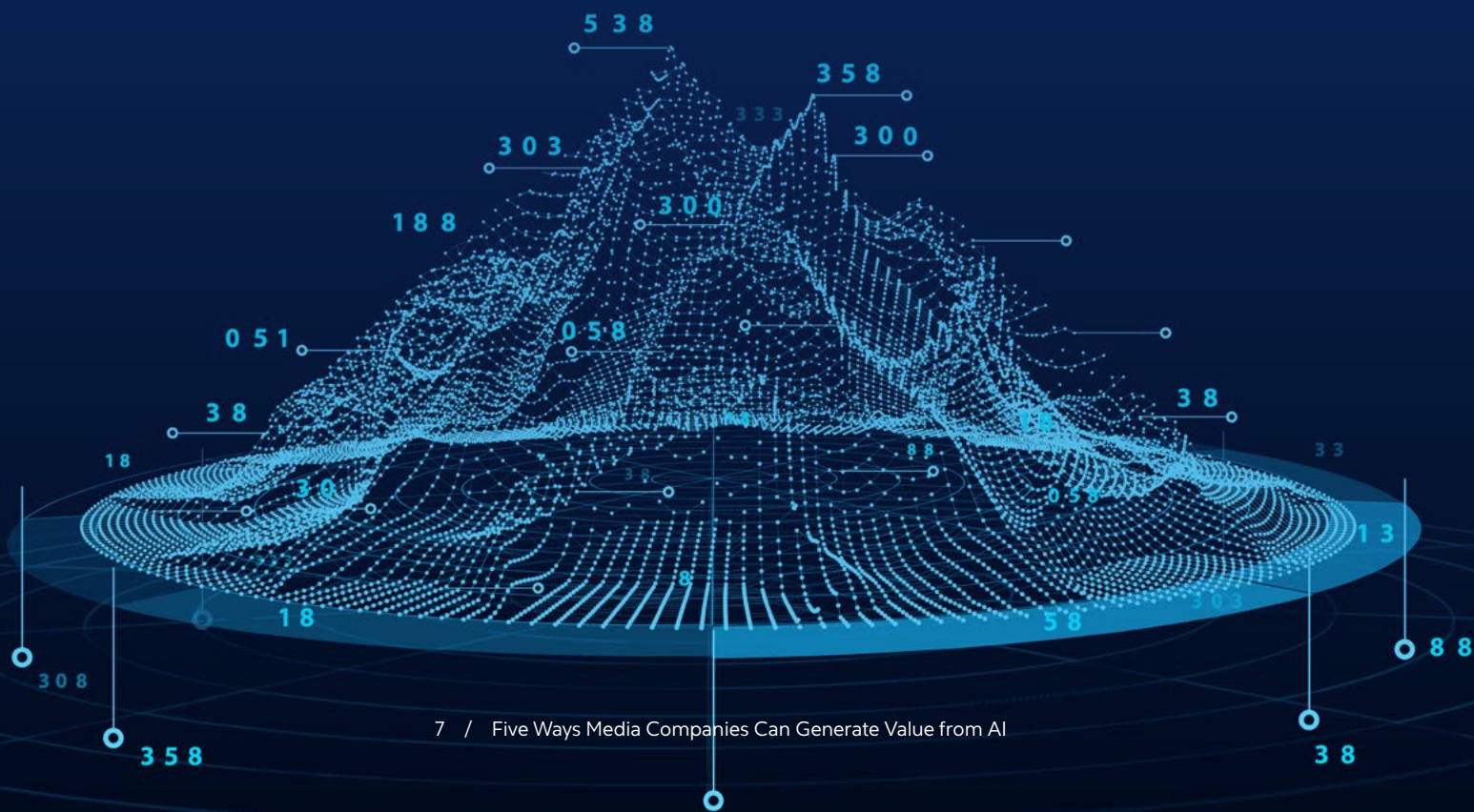
Quick Take

A More Intelligent & Automated Way of Classifying Ads

A media organization sought to save manual effort spent on advertisement classification via an AI-driven automation venture. A pilot conducted using a subset of advertisement data indicated that almost 80% of their effort could be automated.

However, while dealing with a larger set of real-life data, the accuracy of classification decreased and the organization realized that the model needed more time to learn to provide the pilot's level of automation. Upon deeper introspection, the organization also realized that for a particular set of advertisements the classification algorithm was able to generate a higher level of accuracy (almost the same as it had achieved during the pilot). Hence, the organization decided to apply AI automation to that subset.

This helped reduce the manual cost of classification significantly, while efforts were on to improve the classification model for the rest. A greater number of people were retained to handle the processing of the exceptional scenarios than originally planned – but just for a short term.



Since the stakes are high and there is always a risk of failure, it is also important to start with a smaller problem or a subsection of a large problem. This helps to reduce the risk associated with the cost of failure.

data should be available at the time when it is needed (stale data can generate an insight, but that insight may be of no value). And it should be prepared, categorized and classified in a way that makes it readily analyzable.

While media businesses in a digital world are flooded with abundant data, the inconvenient truth is that this data is often unorganized, unclassified, poor quality and/or out of date. So investment in modern data platforms and data management capabilities is critical to drive successful AI initiatives. An [enterprise data strategy](#) is needed that combines the data (i.e., via a data lake or the equivalent) and allows all areas of the business to access it freely.

For example, a customer's history on a direct-to-consumer platform is useful for product managers to understand what features are preferred, for customer service to know what the customer has done on the platform and for marketing to create personalized campaigns.

- 4. Start small, fail fast, be nimble.** The phrase “first time right” does not necessarily apply to AI. That is especially true in making predictions and forecasts. Achieving an acceptable level of accuracy might take a number of iterations and

continuous course corrections. Failure, then, must happen fast in order to learn what to correct.

Since the stakes are high and there is always a risk of failure, it is also important to start with a smaller problem or a subsection of a large problem. This helps to reduce the risk associated with the cost of failure. There's no shame in dropping an idea and rethinking the approach. In fact, that willingness to rethink is vital.

If the viability of a solution is in doubt, persisting with it – and by doing so wasting time and money – is never the right way to go. It is always advisable to course correct or in some cases drop the idea altogether and pick up with a new one. AI is not a magic wand and it cannot solve every problem. Once a smaller problem is solved and the business can see its value – and associated ROI – the solution can be scaled up to solve a bigger problem.

- 5. AI projects are different from IT projects – so measure outcomes, not outputs.** IT and AI projects are inherently different. IT projects proceed with a clear idea and a set target for the desired output from day one. AI, in contrast, is mostly used in the quest to understand the unknown. It's therefore impossible to know what

AI is not a magic wand and it cannot solve every problem. Once a smaller problem is solved and the business can see its value – and associated ROI – the solution can be scaled up to solve a bigger problem.



the output will be ahead of time. AI needs to be tuned, monitored and modified over time. Success with AI may require more iterations than originally planned, and it might not deliver the same level of accuracy or automation as initially imagined. Success should therefore be judged by the degree of impact it creates and how much value that yields.

For example, a media organization spent eight months exploring multichannel advertisement impression data from 112 drama series to identify three impression pattern types. When advertisement impressions on 55 comedy series were explored, the same three impression pattern types came to light, proving that the segmentation criteria were able to scale and were generally applicable across different genres.

Moving forward

With these five steps in mind, media businesses should move forward with AI by following several recommendations:

- I Start now.** AI can be difficult and complex, and it's hard to catch up once you've fallen behind. Even modest successes will teach you a lot, and the real danger in digital is being a laggard.
- I Be wary of approaches that silo your data or solutions.** While implementing a point solution to solve a particular business problem might be necessary in the short term, always ensure you will be able to work with your data more broadly when you are ready.
- I Work tactically, but always have a long-term vision.** You need the deliverable projects that can create business value in the short term to keep

the business engaged. For example, it might be appealing to work bottom up, by first building a world-class data platform with immaculate data from many sources. But this won't intrinsically create value for the business; perfecting this before working on business applications means you might have the wrong data structured in an inconvenient way and you will lose the interest of your business stakeholders, because your net present value will be poor as it will come a long time after your costs.

- I Be ready to solve problems without using AI.** Don't forget that many challenges can be solved with other often simpler tools for data storage, preparation, visualization and reporting – so non-AI tools might be the best first step to help understand the data you have.

Endnotes

- ¹ Ben Sykes, “How Netflix uses Druid for Real-time Insights to Ensure a High-Quality Experience”, The Netflix Tech Blog, March 3, 2020; <https://netflixtechblog.com/how-netflix-uses-druid-for-real-time-insights-to-ensure-a-high-quality-experience-19e1e8568d06>.
- ² Vishnu Subrammanian, “How Netflix’s AI Recommendation Engine Helps It Save \$1 Billion A Year,” artelliq.com, Aug. 7, 2019; <https://artelliq.com/blog/how-netflix-s-ai-recommendation-engine-helps-it-save-1-billion-a-year/>.

About the authors



David Ingham

Head of Media & Entertainment Practice at Cognizant UK

As the leader within Cognizant’s UK Media and Entertainment Consulting Practice, David has over 20 years of experience in IT transformation. He worked on major integrations for top media and entertainment companies, including transforming business processes at comic book companies and music organizations. David recently used AI to predict Oscar winners and streamline business operations. His passion and focus is helping media and entertainment companies grow through the strategic use of technology. David has a BA in economics from the London School of Economics and an MBA from Pepperdine University. He can be reached at David.Ingham@cognizant.com | www.linkedin.com/in/dsingham/.



Sarit Bose

Director, Cognizant AI & Analytics Practice

Sarit is an information management, AI and analytics, and enterprise architecture specialist within Cognizant’s AI & Analytics Practice. With more than 19 years of experience, he has driven several C-level digital initiatives in the communications, media and technology sector. He is a computer science engineer and holds a post-graduate diploma from the Centre for Development of Advanced Computing (CDAC). Sarit can be reached at Sarit.Bose@cognizant.com | www.linkedin.com/in/saritbose/.

About Cognizant Communications, Media & Technology

Cognizant Communications, Media & Technology (CMT) business unit helps clients transform into people-centric enterprises – enabling businesses to create new business models that deliver more personal and relevant customer experiences. We combine human insights with advanced technology to translate customer needs into differentiated content, products and services that power our clients' future. Cognizant applies domain expertise and digital know-how to help CMT companies optimize performance for today and accelerate digital transformation for tomorrow. Our technology innovations, proven solutions product and software engineering expertise, creative interactive prowess and global delivery excellence enable businesses scale to meet the needs of the market.

About Cognizant Media & Entertainment Consulting Practice

Cognizant's Media & Entertainment Consulting Practice is a multi-award-winning consultancy which combines deep domain expertise with advanced thinking across strategy, management consulting and technology to help global 2000 companies worldwide transform and accelerate their digital journeys. We pride ourselves in supporting our clients with their most complex business and technology issues, helping them meet opportunities from digital, organize themselves for growth and to lead in today's dynamic digital age – while planning for whatever tomorrow brings. Learn more at www.cognizant.com/consulting.

About Cognizant

Cognizant (Nasdaq-100: CTSH) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 194 on the Fortune 500 and is consistently listed among the most admired companies in the world. Learn how Cognizant helps clients lead with digital at www.cognizant.com or follow us [@Cognizant](https://twitter.com/Cognizant).



World Headquarters

500 Frank W. Burr Blvd.
Teaneck, NJ 07666 USA
Phone: +1 201 801 0233
Fax: +1 201 801 0243
Toll Free: +1 888 937 3277

European Headquarters

1 Kingdom Street
Paddington Central
London W2 6BD England
Phone: +44 (0) 20 7297 7600
Fax: +44 (0) 20 7121 0102

India Operations Headquarters

#5/535 Old Mahabalipuram Road
Okkiyam Pettai, Thoraipakkam
Chennai, 600 096 India
Phone: +91 (0) 44 4209 6000
Fax: +91 (0) 44 4209 6060

APAC Headquarters

1 Changi Business Park Crescent,
Plaza 8@CBP # 07-04/05/06,
Tower A, Singapore 486025
Phone: + 65 6812 4051
Fax: + 65 6324 4051