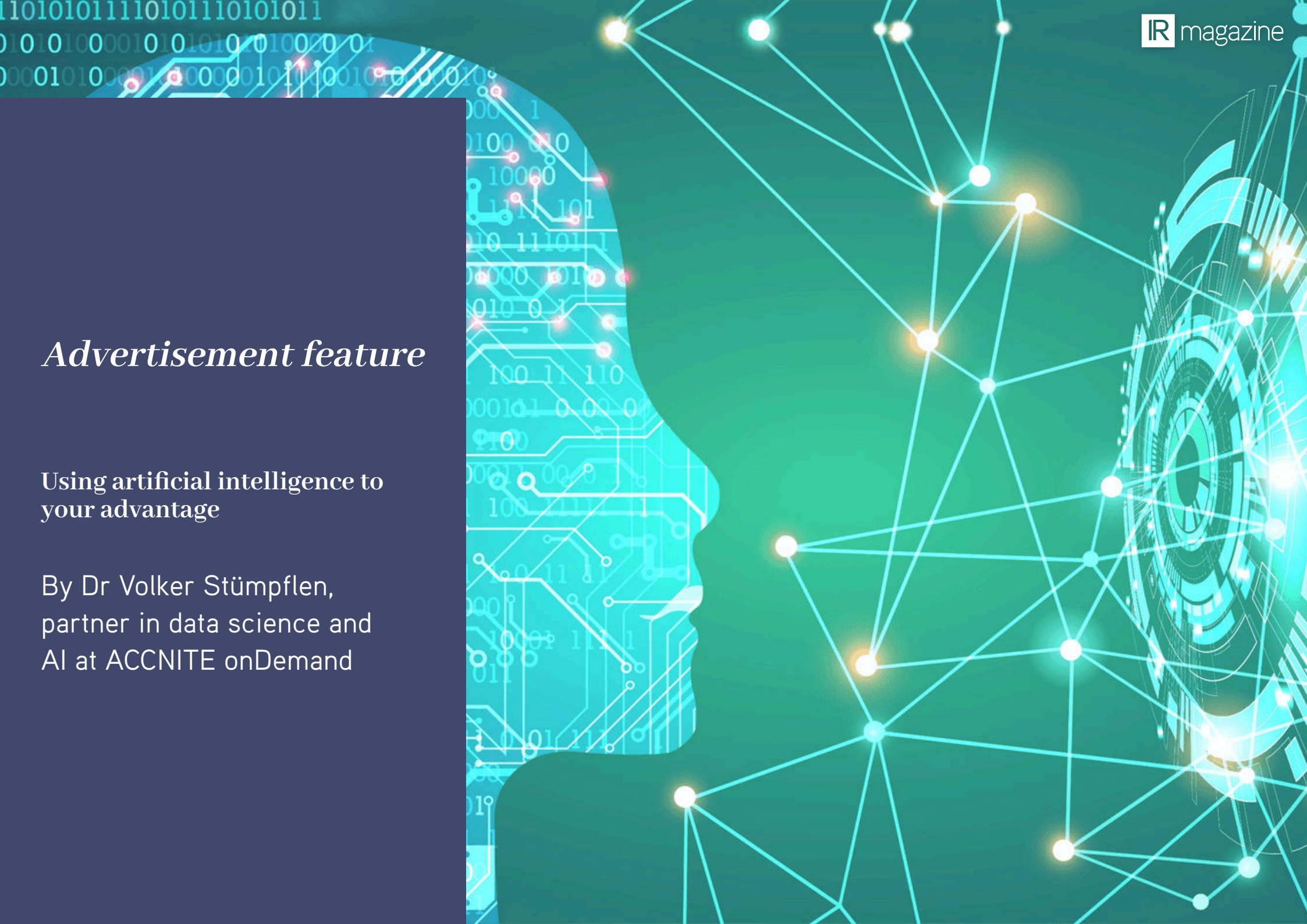


## *Advertisement feature*

Using artificial intelligence to  
your advantage

By Dr Volker Stümpflen,  
partner in data science and  
AI at ACCNITE onDemand



# Using artificial intelligence to your advantage

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New technology should improve existing processes, yield better results and save on time and costs. Artificial intelligence (AI) has the potential to tick all the boxes in terms of analyzing large amounts of data.

Investor targeting is a prime example of how machine learning and AI can play to your advantage. Huge amounts of company and investor data are readily available, but manually filtering, analyzing and drawing conclusions from it is both time-consuming and requires substantial domain knowledge to avoid mistakes.

This article addresses the common concern that AI will return black-box suggestions that are unhelpful in a people-centric business. It aims to provide an understanding of the principles behind the algorithms, their advantages and shortcomings in order to show how AI can benefit you.

## Where traditional approaches fall short

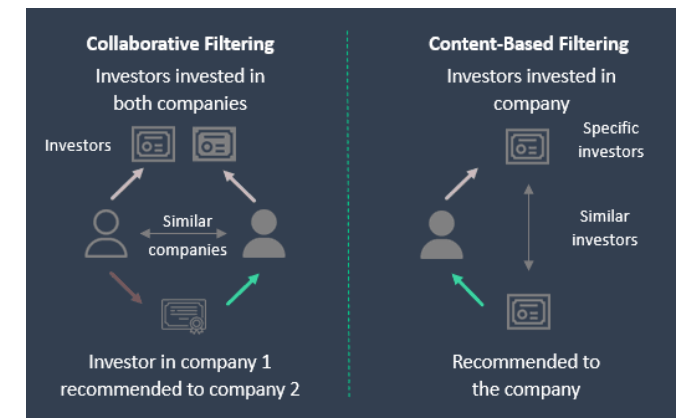
There are three obvious challenges when it comes to peer group-based methods used to discover potential investors: a very detailed analysis of the investment criteria relevant to your company is necessary, identifying the right list of peers requires excellent investment universe knowledge and the long list of results must be ranked by goodness of fit, which is time-consuming.

Leaving this problem to the sell side additionally introduces ranking bias because of the inherent conflict of interest of the sell side servicing both you and its investor client.

## How recommender systems approach the task

As a consumer, you will be familiar with recommender system algorithms suggesting products or services you may be interested in, and

your marketing/sales teams probably also use them to enlarge your customer base. Target-investor identification is a similar problem. There are two basic types of recommender system that can be used as a starting point.



Similar to a merged shareholder analysis, content-based filtering uses investment characteristics to identify potential targets based on their existing holdings. Simply put, it defines your group of peer companies. To reduce complexity when working manually, investment characteristics tend to be limited but an algorithm can potentially select from the entire investment and investor universe.

### Advantages of content-based filtering:

- The model considers each investment portfolio individually and is easy to scale
- The model captures specific investment portfolio features and recommends investors based on niche features.

### Disadvantages of content-based filtering:

- To train the algorithm, the model requires investment characteristics, necessitating considerable domain knowledge as the model is only as good as its investment characteristics
- The model is constrained to existing investments; it cannot 'think' laterally and expand beyond these.

Collaborative filtering addresses some of these limitations. It produces results by simultaneously considering similarities between investment portfolios and companies. These are calculated from what are known as embeddings, which represent direct and indirect observable data features.

The algorithm is therefore capable of considering ESG strategies simply by observing investment behavior, even if there are no other hard facts in the underlying dataset.

### Advantages of collaborative filtering:

- Embeddings and similarities are automatically picked up and learnt
- The model takes a broader approach and identifies targets beyond peer group holders
- The system can produce results based solely on information about investor holdings.

### Disadvantages of content-based filtering:

- The model requires a number of data points about your company and its interactions with investors in order to calculate the embeddings. If insufficient data is available, the algorithm produces biased results
- It is difficult to understand the effect of smaller patterns resulting from side features, which might include country or portfolio size.

Both models produce target investor identification results superior to those obtained by the manual approach. Their results improve accuracy, work with a larger dataset and are faster to produce.

Good technology does not use one stand-alone model but rather applies a number of models in a hybrid approach to further optimize output quality.

To take this one step further, look for tools providing deep learning capabilities that can better handle side features and improve output ranking, but be aware that such models are more complex to train and run.

### With large amounts of data, machines have the advantage

AI follows a different approach from conventional investor targeting, turning away from lopsided data analysis. Similar peer group investments are no longer the sole criterion for identifying potential investors: AI can combine different models analyzing gigabytes of data.

### Applying AI to targeting: Five key takeaways

1. Machine learning is widely accepted as being able to successfully solve similar problems. AI is more efficient and produces superior results in terms of input/output time and precision.
2. AI helps you handle complexity, taking more features into account and requiring less human interpretation of the machine's output to prioritize your efforts.
3. 'Black-box' results can be avoided.

4. AI recommendations are free of bias, analyze a broader universe and present their output at portfolio level.
5. Target-investor identification is just the beginning of investor targeting.

Segmentation, personalization and the right engagement strategy turn targets into contacts and contacts into long-term relationships. AI works to your advantage in identifying potential increment investors. Making a machine-learning tool an integral part of your workflows saves on time and costs while yielding better results.

To find out more about how the different algorithms work in target investor identification, visit our [15-minute webcast](#). It goes into more detail on how embedding works and provides an example of the differences in results obtained from a merged shareholder analysis versus AI.

## About ACCNITE onDemand

ACCNITE onDemand is an integrated investor relations CRM solution. The cloud-based application digitizes and simplifies IR workflows centered around investor engagement, feedback, shareholder identification and investor targeting based on artificial intelligence.

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