Case Study: Communications, Media & Technology

Digital Ad agency uses AI and deep learning to improve conversion rates for digital marketing campaigns.

Search advertising is the most powerful way to target prospective customers with relevant ads. In fact, it continues to attract a disproportionate share of online marketing spend. With ad extensions, brands can pinpoint the targeted audience and further increase performance of campaigns. These ad extensions are like a dog whistle, drawing interested customers to further engage with brands assets. These call to actions directly impact conversion rates and provide relevant insights at a glance.

Cognizant was tasked with helping a digital advertising agency improve the click-through and conversion rates for the campaigns it was managing for its end-customers. The agency's existing process to identify relevant ad extensions process was manual and tedious.

- Campaign managers struggled to write a compelling call out that could drive conversion and still adhere to the ad extension platform guidelines. Maintaining word count, character limits, and the number of extensions added to the challenge.

- Guidelines were constantly changing as the platform received frequent updates. Campaign managers were often

At a Glance

A digital advertising agency wanted to improve click-through rate of the ad extensions created for their customers. To deal the tedious and slow manual process of navigating each customer's websites, agents added high-value ad extensions that precisely identified the right value propositions per policy guidelines.

Outcomes

- 50% efficiency gains.
- 85% accuracy of deep learning algorithm.
- 10% increase in click-through rates.
- Methodology and algorithms are scalable and reusable for multiple NLP use cases.

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trailing behind, which meant more time had to be spent on training.

- Additionally, the customers' web content was often updated and needed constant monitoring to ensure there were no mismatches between what was being sold and what was available. Speed to market was further hampered by the additional quality assurance (QA) process required for platform compliance.

The entire process of creating the ad extension was so focused on platform compliance that the core objective of driving ROI through the best click-through rate was lost.

Automating the Right Ad Extensions

We designed an automation tool to create ad extensions that featured deep learning-based natural language processing (NLP). With the help of artificial intelligence, the automation tool was able to recommend the best ad extensions for each website, based on research of customers' sites to identify the right value propositions and also conforming to their compliance needs.

The solution had five key components. First, website scraping collected real-time insights on the company's brand offerings. Next, the relevant text was clustered, converted into ad extension format, and checked for quality in real time.

This text was processed through a recurrent neural network with long short-term memory (LSTM) deep learning model to predict selection probability of new words or set of words. The terms with the highest probability of selection were used for recommendation.

In addition, the hyper-parameters were tuned to ensure model accuracy. This text mining gave the online ad agency a scalable way to collect and organize the critical data aggregated for each site. The overall solution was developed using Python Pytorch. This helped to determine the best ad placements for different websites of the end-customer, improving their productivity and overall effectiveness.

By finding new insights, and building an AI-based solution, we were able to enhance the performance of ad extensions across a large number of websites. By integrating advanced analytics into a human process, the productivity of the campaign managers was improved by 50%, increasing the effectiveness of the ad extensions by 10%.

In addition, the methodology and algorithms used in this solution are scalable and reusable for multiple NLP scenarios.

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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. Visit us at **www.cognizant.com/communications-media-technology**

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Cognizant Digital Operations helps clients re-engineer, digitize, manage and operate their most essential business processes, lowering operating costs, improving user experiences, and delivering better outcomes and topline growth. Across the practice, we are creating automated, data-driven platforms and industry utilities. We help clients run better by applying traditional optimization levers, and we help them run differently by creating competitive advantage through making their processes digital-ready, which often leads to more effective operating models and corresponding topline revenue growth. For more information, please visit **cognizant.com/cognizant-digital-operations.**

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 193 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.

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