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Automation boosts conversion for marketing campaigns

An automation tool helps a digital ad agency create ad extensions featuring deep learning-based NLP to help its customers improve click-through rates.

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 campaign performance, drawing in interested customers to further engage with brands assets. These calls to action directly impact conversion rates and provide relevant insights at a glance.

At a glance

A digital advertising agency wanted to improve its click-through rate of the ad extensions created for customers. To deal with the tedious manual process of navigating customers' 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

The challenge

Our agency client wanted to improve the click-through and conversion rates for campaigns it managed on behalf of its customers. The existing process, which involved identifying relevant ad extensions, was manual and time consuming.

There were also additional challenges:

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

▍ Guidelines were constantly changing, as the platform received frequent updates. Campaign managers were often trailing behind, which required additional time spent on training.

▍ 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 slowed by the additional QA needed 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.

The approach

We designed an automation tool to create ad extensions that featured deep learning-based NLP. The tool was able to:

▍ Recommend the best ad extensions for each website based on research of customers' sites

▍ Identify the right value propositions

▍ Ensure conformity based on compliance requirements

Automating the right ad extensions

The solution first performed website scraping to collect real-time insights on the company's brand offerings. Next, the relevant text was clustered and converted into the ad extension format and checked for quality in real time. The third step involved processing the text through a recurrent neural network, using a long short-term memory (LSTM) deep learning model to predict selection probability of new words or sets of words. The terms with the highest probability of selection were then used as recommendations.

The solution was also able to tune the hyper-parameters to ensure model accuracy. This text-mining step gave the online ad agency a scalable way to collect and organize the critical data aggregated for each site.

The overall solution, developed using Python Pytorch, helped determine the best ad placements for different end-customer websites, which improved their productivity and overall effectiveness.

Business outcomes

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

▍ Integrate advanced analytics into a human process

▍ Improve the productivity of the campaign managers by 50%

▍ Increase the effectiveness of ad extensions by 10%

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

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 185 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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