

Improving the ONS search engine

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We investigate challenges related to the site search function of the Office for National Statistics (ONS) website and make recommendations on possible improvements. Although there is a wealth of literature on search engine optimisation (SEO), most solutions are designed for commercial websites that do not share similar goals and constraints as public sector websites. We will discuss why off-the-shelf solutions are not always suitable and where there is a gap, we explore dedicated approaches. We report on ideas that we found promising, as well as experiments that have not led to successful outcomes. We hope that our research will inform the web analytics community and invite suggestions for new ideas.

Team members

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The need

Currently, more than 60% of traffic to the ONS website comes from Google. It is clear that the ONS site search function needs improvement. As part of a wider improvement effort, the ONS Digital Publishing team have launched a project in partnership with the ONS Data Science Campus to investigate and optimise the site search capability.

Impact

This research focuses essentially on understanding users' behaviours and intents. Understanding who the users are helps to better meet their needs. The main aim is to inform ONS web developers and content designers on how to retrieve and rank search results in a meaningful way for users.

Data science

We investigate how data science techniques such as Natural Language Processing (NLP) - in topic modeling - and unsupervised machine learning can be used to:

- bridge the barrier between users' language and ONS terminology
- gain a better understanding of what content our users are trying to find on the website.

Stakeholders

We are collaborating with the ONS Digital Publishing team.

Code and outputs

A report has been published on the Campus website, discussing our findings and sharing our experience on ideas that we found promising, as well as experiments that have not led to successful outcomes.

Delivery

Optimising the ONS site search function with Google Analytics and Natural Language Processing was published in August 2018.

Further information

Please contact datasciencecampus@ons.gov.uk for more information.

Updates

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Lanthao Benedikt produced a blog post detailing the process and outcome of this project in August 2018.