



Powering human conversation with code

You might not realise it, but something as everyday as searching the web means that a computer is performing an incredibly complex task – picking through billions of web pages to find the one you’re looking for.

And it’s computer code that makes this possible – code on your phone but also code in the search engine, running on computers that could be thousands of miles away.

Search engines constantly index the web and create something incredible – a vast catalogue of human knowledge.

Without indexes, it just wouldn’t be possible to find anything. Imagine trying to find a recipe in a cookery book without an index. Now imagine trying to find the right recipe from millions of cookery books.

The words that I type on my phone are sent to the search engine for analysis. If a word seems unusual, it checks to see if it’s a misspelling.

The search engine moves to lists of similar words that, from past experience, are more likely to be what I intended. It also uses these lists to work out what I’m after. For example, ‘vegetarian’, ‘vegetable’ and ‘vegan’ are all noted alongside my original word – ‘veggie’.

For each key word, the search engine will look through the indexes and pull out pages that contain them. It then compares the lists for each word to find overlapping pages in both.

These pages are then ranked into order of relevance according to lots of factors. Things like, ‘How often do the search words appear on the page?’, ‘Are they near the top or, even better, in the title?’, ‘Are the words you type in close to each other on the page?’

The different search engines use different programs, but they all attempt to read my mind and present me with what I want.

And in less than a second, what I get is a nice ordered list of the best results from billions of webpages.

The power of computer code, for me, is the ability to change the world with something that comes out of the human imagination.

Just like a novel can create an entire universe through the use of language, computer code can be used to create systems that do truly remarkable things.