Using Innovative Technology to Enable Advanced Medical Provider Search

Tim Barnickel, Lead Architect, Enterprise Architecture HM Health Solutions
6/2016

Emerging innovative technology can now be applied to assist consumers to easily search for medical providers. A core aspect of this new advanced search engine technology supports "natural language like" and auto-suggest capabilities, similar to what end users are accustomed to with web search engines such as Google. A key requirement of this new approach, versus existing medical provider search capabilities, is that the consumer is not forced into a rigid and complex structured user interface. As an example of the new approach, a consumer can now input "foot doctor" into a general search box and the system will search for podiatrists, using advanced synonym capabilities, while also leveraging geospatial technology to further guide the search.

To complement advanced search engine technology, user interface (UI) design and technology has also rapidly evolved to enable consumers to conduct their search across devices with a wide range of capabilities and form factors, from smartphones through desktop computers. To provide a high quality UI, the "mobile first" design technique can be leveraged to optimize the consumer experience on a smartphone, while also leveraging responsive web design to ensure that the UI is rendered appropriately based upon the device's form factor. Furthermore, mobile phone geolocation capabilities assist with proximity based search. Advanced "open source" UI frameworks continue to rapidly evolve with new capabilities to facilitate the implementation of the UI layer.

HM Health Solutions has recently built a new provider search capability that leverages IBM Watson search technology, part of IBM's emerging "cognitive computing" platform. The UI was built with the popular open source framework, AngularJS from Google. Moving forward, HMHS will continue to evaluate advances in natural language search and other innovative technologies to further enhance provider search capabilities for its customers.