Project Title:Generalised Needs-based Product Configurator Design
研究項目:通用的基於需求的產品配置系統設計
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Abstract

Product configurators are considered to be critical toolkits for customised product design and have been successfully implanted in various companies, such as Dell, BMW and Nike. This configure-to-order process requires customers to possess the necessary domain knowledge of the product. However, customers may not have the appropriate expertise with unfamiliar products. Due to customers' lack of domain knowledge and unawareness of latent preferences, they may only express needs in vague and imprecise language. A research gap thus exists.

This proposal will develop a generalised needs-based configurator to overcome these challenges. We will leverage natural language processing techniques to interpret ambiguous and probably ill-defined customer needs sentences and map them to well-defined product configurations through a two-step approach. Using the massive amount of product review data from e-commerce website, we build a mapping from reviews to product configurations using deep learning techniques. Then the model will be adapted to a new mapping from customer needs to product configurations by using the relatively small amount of customer needs data. Through this process, a more user-friendly product configuration process will be designed.