Deep Choice: A Deep Learning Approach to Consumer Choice

Gijs Overgoor
University of Amsterdam
Bill Rand
North Carolina State University

Deep Choice: A Deep Learning Approach to Consumer Choice

Abstract

We propose a Deep Choice model to model consumer search and choice. Existing consumer search models focus mainly on a single attribute or a couple of attributes, but our architecture allows for high-dimensional input and it can handle different modalities. This allows examination of all information that is visible to consumers when making search and choice decisions. The model is tested on a dataset provided by a global online travel agency. Our method improves prediction accuracy over traditional models. Our future efforts include improving explainability and we intend to address the debate about the trade-off between prediction accuracy and explainability.