

# Data Science Brings New Product Recommender To Life on Kroger.com

## WHAT IS THE NEW PRODUCT RECOMMENDER?



New Product Recommender science measures how purchasing product A affects the likelihood of a customer to purchase product B, which they have not bought before



This science meets the needs of customers who feel they are missing out on relevant product offerings available by not walking down an aisle or might be overwhelmed given the selection in-store and online



We utilize LASSO regression models to determine which part of the store customers are most likely to make new product purchases, and then apply Collaborative Filtering to identify items that a customer may like to try for the first time.

## MACHINE LEARNING AND NATURAL LANGUAGE PROCESSING PLAY A MAJOR PART IN OUR PERSONALIZATION SCIENCE

- 84.51°'s data science team uses machine learning algorithms and Natural Language Processing (NLP) to create a variety of sciences used to personalize the digital experience
- Machine learning involves the use of advanced mathematical techniques to develop models that can be used to automate at scale a wide variety of tasks, e.g. identify which of the 50,000 unique products that each of 20MM customers are most likely to purchase
- NLP is the combination of computational methods and language that allows us to accomplish scaled tasks when using text or speech data, e.g. identifying all UPCs that match a specific recipe ingredient.

