

# Problem statement formation

Develop a model that can accurately predict the relevance of search results.

## Context

Shoppers rely on Home Depot's product authority to find the best solutions for their house improvements. So we want to optimize Home Depot's search algorithms. By finding the relevance between people's needs, we would like to develop a model that can accurately predict the relevance of search results.

## Criteria for success

Use RMSE to evaluate the model

## Scope of solution space

In this project, only the Home Depot's relevant products will be predicted. Furthermore, the other home improvement store could be applied this model smoothly under some circumstance. For example, Lowe's Ltc.

## Constraints

The results will be limited by customer's personality, seasonal, inventory's status and data's timeliness.

## Stakeholders

Home depot and its competitors.

## Data sources

<https://www.kaggle.com/c/home-depot-product-search-relevance/data>