

# **Creating an Amazon Recommendation System**

## **Capstone Proposal**

Lanxi Liu

During the pandemic time starting in 2020, people spend a tremendous amount of time at home. It is really the time that people start to plan about home improvement. According to Max Aderson, chief economist at Porch.com, it has reached all-time high in terms of like measured history in the United States, this is the, the highest levels of, of home improvement spending we've ever seen.

Imagine people start browsing the Amazon website to get some inspiration for their projects. It will be good to have a well-developed recommendation engine that reads customers' minds and prompts more sales.

On the other hand, as a customer looking for stuff for home improvement, I would like to be recommended related items whether they are related to what I am browsing or just popular and trending items people are buying. It would save a lot of time brainstorming about what I want.

For the data, I choose to use the famous Amazon data set because I was able to extract review data specifically for home & kitchen. Other than the rating of the item, Amazon data also includes very useful review contents. It would be a good idea to utilize natural language processing skills on the recommendation engine to improve its performance.

To start the project, I will explore the dataset first. EDA is a critical step, which helps me understand the dataset. Then I will need to determine what will be included as prediction metrics. Multiple trials will be performed to see what combination of metrics give the best prediction.

The final model and its performance will be presented with a slide deck and a project report.