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Laptop Rec-Sys

A Hybrid laptop Recommendation System Using NER

A dissertation by

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Abstract

Problem

It is challenging for laptop manufacturers to sell their products and for buyers to choose their laptop due to the abundance of specs and brand names on the market. The purchase decision an average buyer faces is a tough one and the only way they could attempt at making the right choice is by going through reviews for hours.

I created a hybrid recommendation system that uses custom named entity categories in the laptop domain to take user input and recommend based on that input. This system solves three common problems in recommendation systems: cold start, domain specificity, and data sparsity. The cold start problem is solved by using user input as a source of preference information, instead of relying on previous ratings or purchases. The domain specificity problem is solved by using custom named entity categories that capture the relevant features and attributes of laptops, such as brand, processor, memory, etc. The data sparsity problem is solved by using a hybrid approach that combines content-based and collaborative filtering techniques, which can leverage both item descriptions and user feedback to generate recommendations.

The test result I received based on the above project is a mean average precision (MAP) of 0.5, which means 50%. This means that the system is able to rank the relevant recommendations higher than the irrelevant ones half of the time. This indicates a moderate level of accuracy and effectiveness of the system.