Laptop Recommendation System (LapRec) - Phase 1

BCS-6M

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Problem Statement & Project Description:

I.   Motivation

The exponential growth of the laptop market has created a challenge for both consumers and manufacturers. Shoppers face a bewildering array of choices, with technical specifications like processing power, RAM, storage capacity, and graphics capabilities all vying for their attention. Furthermore, brand loyalty and budget considerations add another layer of complexity. An AI-powered laptop recommendation system aims to bridge this gap. By analyzing vast datasets of laptop features alongside user preferences, these systems can become intelligent shopping assistants. They can identify key factors like desired processing power for creative tasks, prioritize long battery life for students on the go, or recommend specific brands based on past user satisfaction. Ultimately, an AI model can empower consumers to navigate the ever-expanding laptop market with confidence, ensuring they find the perfect match for their needs and budget.

II.   Project Description

The **Laptop Recommendation System (LapRec)** is a web-based application that will utilize this model to receive major specifications from the user and appropriately suggest well-suited laptops to them, usually on the bases of ratings.

III.   Importance

LapRec is like having a personal shopping assistant in this tech jungle. It analyzes all specs alongside what one really needs, whether it's serious processing power for editing videos or just

a long battery life for schoolwork. No more info overload, just clear choices that fit a customer's budget according to his requirements.

IV. *Sample Dataset*

We found this on Kaggle: https://www.kaggle.com/datasets/bhavikjikadara/brand-laptops-dataset

The dataset after processing has 991 rows and 16 columns. It has details of unique laptops sourced from the website 'Smartprix'. The dataset describes various laptop features such as brand, name, prices, hardware specification, and so on.

Since the dataset was very large, I have submitted a **`'data-cleaned.csv'`** as well.

V. *Github*

You can checkout the Github repository here: https://github.com/SadeemSajid/laprec/tree/dev
Make sure to switch to the **dev** branch.