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ADS 558

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Final Project Proposal
PC Purchase Problem HW4

Write a description of a final project for this course. You should indicate whether this is a project you would like implement, or that it is purely speculative. You should specify the problem domain (e.g., finance, politics, medicine, dating, movies, etc.), the implementation language (e.g., R, Python, etc.), the decision making paradigm (e.g, Monte Carlo, expected value, linear regression, rule based system, case base system, etc.). Describe the behavior of the program, e.g., use cases or "for this input, the program gives this output." You should describe how the system would work. This could be a process model, a flow chart, list of data structures, etc. You are welcome to choose one of the sample final projects. [Note: given that I am telling you this ahead of time, it should be very difficult to lose points.

1. Domain

    1.1. A Goal-Based Model

    1.2. Optimal choice between limited resources and goals

2. Implementation Language

    2.1. Python

3. Paradigm

    3.1. General Goal

        3.1.1. Specific usage purpose

        3.1.2. Same settings with lowest price/ best quality of computer type

    3.2. Limited Resources

        3.2.1. Limited budget/Money

        3.2.2. Sales time span

    3.3. Personal Preference

        3.3.1. Brand preference/familiarity

        3.3.2. Operating system preference

3.4. Other Factors

    3.4.1. Friend recommendation

    3.4.2. Website product ratings

* use python beautiful soup bs4 library to web scrape the rating information of each type of product

4. Behavior and descriptions:

4.1. Input

    4.1.1.A dictionary of products information: a)name b)company/brand c)operating system d)processor/gpu etc. information

    4.1.2. A dictionary of user information: a) budget b) brand preference c) purchase history d)relative information

    4.1.3. A dictionary of sales information: a) product sales discounts b) sales time span

    4.1.4. Other strategies: this part can be set as None, but also could be served as more flexible for system to consider factors like ratings.

4.2. Output

    4.2.1. 3 candidates of computer types for user to choose

    4.2.2. A description for each candidate

    4.2.3. After user choose one of three candidates(or choose none), this decision making would be put into database as an history training data set.