Jyothy Institute of Technology

Department of Artificial Intelligence and Machine Learning

PROJECT PHASE-2
SEMINAR(18AIP77)
Review - 4
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"PriceProbe: E-Commerce Platforms Using Machine Learning"

Presented by :

A S Sushmitha Urs	[1JT20AI001]
Abhishek Kumar Pandey	[1JT20AI002]
Jagruthi G	[1JT20AI013]
Vaibhavi B Raj	[1JT20AI047]

Under the Guidance of

Mrs. Archana VR
Assistant Professor

Overview

1. Introduction
2. Problem Statment
3. Objectives
4. Proposed Methodology
5. Design
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INTRODUCTION

In the competitive landscape of e-commerce, finding the best deals can be overwhelming. Enter PriceProbe Chatbot: an innovative solution that simplifies shopping. By analyzing data from various platforms, it offers real-time comparisons and exclusive discounts. Its adaptive nature learns from user interactions to provide personalized recommendations, ensuring relevance and responsiveness. PriceProbe Chatbot empowers users to make informed decisions, enhancing convenience and savings in online shopping.

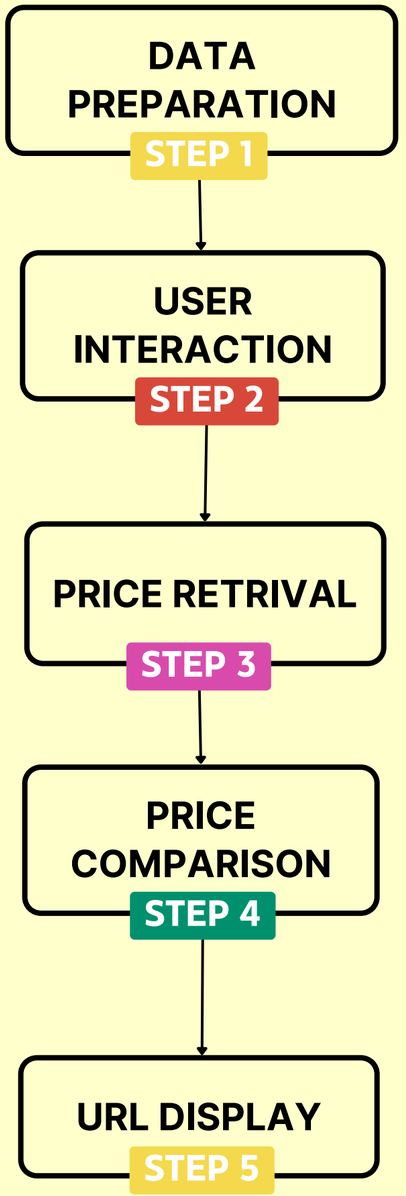
PROBLEM STATEMENT

In today's e-commerce landscape challenges users to find the best deals across platforms. PriceProbe, with chatbot integration and machine learning, offers real-time updates for streamlined shopping, providing efficient price comparisons and optimal deals instantly.

OBJECTIVES

- Analysis and data preprocessing using webscraping
- Design a scalable and modular system architecture that supports data ingestion, processing, analysis, and presentation layers.
- Evaluate the Price Probe. This tool helps users find discounts and save money by automatically comparing prices from several sellers. It also analyses user interests and behaviour to provide personalised recommendations.

PROPOSED METHODOLOGY



Methodology Flowchart

- **Data Preparation:** Initializing the necessary libraries, including requests and BeautifulSoup. Defining the headers variable to include a user agent, which helps mimic a web browser when making requests to the websites.

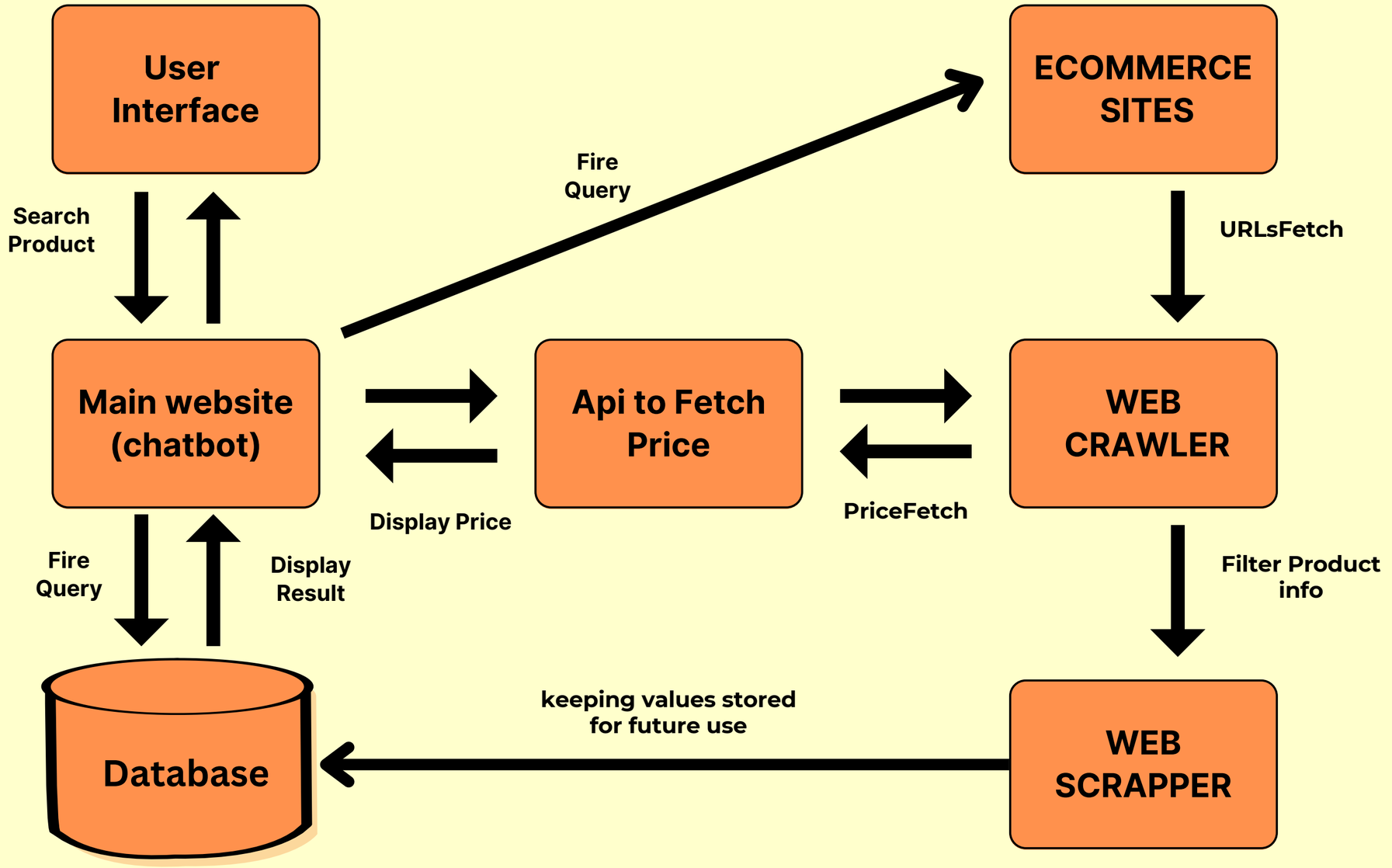
- **User Interaction:** Prompting the user to input the product name from the interface (chatbot).

- **Price Retrieval:** Implementing three functions, flipkart(), amazon(), and croma(), to search for the product on each website and retrieve the price. Each function uses the requests library to send a GET request to the website's search API and then parses the HTML response using BeautifulSoup.

- **Price Comparison:** After retrieving the prices, comparing them to find the minimum price. Filtering out non-positive prices and then calculating the minimum price.

- **URL Display:** Printing the minimum price and the corresponding URL for the product on the website offering the lowest price. Also printing the URLs for the product on all three websites for reference.

DESIGN


User Interface
ECOMMERCE SITES
Search Product
Fire Query
URLsFetch
Main website (chatbot)
Api to Fetch Price
WEB CRAWLER
Display Price
PriceFetch
Fire Query
Display Result
Filter Product info
Database
keeping values stored for future use
WEB SCRAPPER

IMPLEMENTATION

This process can be broken down into several steps:

1.Initiating a search or fire query: The process begins when a user searches for a product, either by interacting with a user interface on a main website or through a conversational chatbot.

2.Displaying the search result: Based on the user's query, the system retrieves a list of relevant products and displays the search result to the user.

3.Connecting to a database: The search result is connected to a database that contains comprehensive product information, including product descriptions, specifications, and corresponding prices.

4.Fetching the price: To fetch the price of a product, the system uses an API (Application Programming Interface) to communicate with external services,
which provide real-time price information.

5.Displaying the price: The fetched price is then displayed as part of the product information for the user to view.

6.Storing values for future use: The system may temporarily store data in a cache for fast access, which helps to improve the overall user experience by reducing the time needed to fetch and display information.

7.Collecting product information: The system uses a web crawler and web scraper to gather URLs and extract relevant product information from various
e-commerce sites. This is an essential step in the data collection and pre-processing phase, ensuring that the system has up-to-date and accurate product
information.

8.Filtering product information: After fetching the raw data, the system filters and processes the information to remove irrelevant data, correct errors, and format the information in a user-friendly manner.

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Thank You