NEW ZEALAND Attractions & Tickets Statement of Intent

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Background

As part of our operations to facilitate Chinese tourists' travel to New Zealand, we provide a service that allows customers to purchase tourism activities using Chinese Yuan (RMB). We have established collaborations with core scenic tourism projects in New Zealand. To efficiently manage our partner suppliers, who are mostly small-scale businesses, we currently utilize spreadsheets to handle various business information and ticket prices.

To effectively manage the services offered to customers, including order placement and other relevant information, we rely on a combination of spreadsheets, telephone calls, and email communications. However, we acknowledge that this process can be labor-intensive, especially when comparing prices from various e-commerce websites to ensure our offerings remain competitive in the market. It's worth noting that market discount prices often fluctuate, while our own costs remain constant.

The Problem to Solved

Manually comparing activity prices and the current manual management of merchant lists and ticket sales through spreadsheets prove to be highly time-consuming, error-prone, and lack a customer-friendly interface. Additionally, relying solely on social media communication for comparing prices and obtaining detailed information about attractions related to their itineraries may not offer an intuitive and timely experience for customers. Moreover, the fluctuating cross-border exchange rates pose a significant challenge. Variations in the exchange rate between customers' payment currencies and the New Zealand dollar can result in disparities between the paid rate and the actual settlement rate, causing financial reconciliation difficulties for the company.

To enhance customer experience, improve efficiency, and expand our company's influence, I propose the development of a data crawler. This crawler will be designed to gather relevant activity and pricing data from other websites, allowing us to compare and analyze the information against our own offerings. By leveraging data analysis, we can provide feasible pricing adjustment recommendations to maintain competitiveness in the market.

If time permitting, we aim to create an e-commerce website that allows customers to book and purchase tickets for various New Zealand attractions. The backend system will facilitate the management of supplier information and order details.

By implementing this data crawler and potential e-commerce website, we aim to streamline our processes, offer better pricing to customers, and strengthen our market position in the travel industry. This project will not only benefit our customers but also improve the overall efficiency and competitiveness of our business.

The Proposed Solution

Planned Prepare

- Database MYSQL: create tables, including merchants, projects, orders, exchange Rates, etc.
- Using the Django framework
- Data extraction (Crawling): tourism item data capture as basic information, use Python to extract data from https://nz.trip.com/ and https://www.bookme.co.nz/, including the name, description, The main image, detailed image, and price information are used as the information in the basic information database and stored in the database MYSQL
- The third-party payment platform API is required to support international payment

Main functions

1. Background management system

    1.1 Activities management
        - Activities List: Areas, Activities
        - Activities details: Activities name, main image, detailed image, description, location, standard price, platform 1-discount price, platform 2-discount price, cost, company current price

    1.2 Data analysis-price: view more in the form of charts and drillable

    1.3 *Order management （optional）*

    1.4 *Customer Management （optional）*

2. Foreground website （optional）

    2.1 Activities Lists

    2.2 Activities Detail

    2.3 Place order and pay order

The Next Steps

1. Research and Planning: Begin by conducting in-depth research on data crawling and analysis techniques to ensure an effective and efficient process. Outline the scope of the project, including the specific websites to crawl, data parameters, and data analysis methodologies.

2. Data Crawler Development: Build the data crawler. The crawler should be able to extract activity and pricing information from various tourism websites accurately and in real-time.

3. Data Analysis: Establish a data analysis framework to process the extracted data and generate meaningful insights.

4. Exchange Rate Management: Utilize appropriate APIs to handle cross-border exchange rate fluctuations. Implement a mechanism to ensure consistency between the paid rate and the actual settlement rate, minimizing financial complexities.

Potential Challenge

1. Website Structure Changes:

The websites I plan to crawl for activity and pricing information may undergo structural changes, leading to data extraction issues. Regular updates to the crawler will be required to accommodate these changes.

2. Data Quality and Consistency:

The data retrieved from various websites might be inconsistent or of varying quality, which could affect the accuracy of the analysis and pricing recommendations.

3. Data Privacy and Legal Issues:

Data crawling may raise concerns related to data privacy and legal compliance. Ensure that the crawling process respects the terms of service of the websites and adheres to relevant data protection regulations.

4. Anti-Crawling Measures:

Some websites may have anti-crawling mechanisms in place, making it challenging to extract data. Implement strategies to bypass these measures without violating the website's policies.

5.Data Analysis Complexity:

Analyzing and comparing data from multiple sources to provide meaningful pricing recommendations may be challenging due to the volume and diversity of data.