Hackathon · Team 10

Online Wine Price Harvesting Challenge

The Team

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Approach

1. The Challenge
2. Strategy
3. Technical dimension
    - Web Scraping
    - Data Management
4. Visualization & Interaction
    - Interface Design
5. Current state
6. Next steps

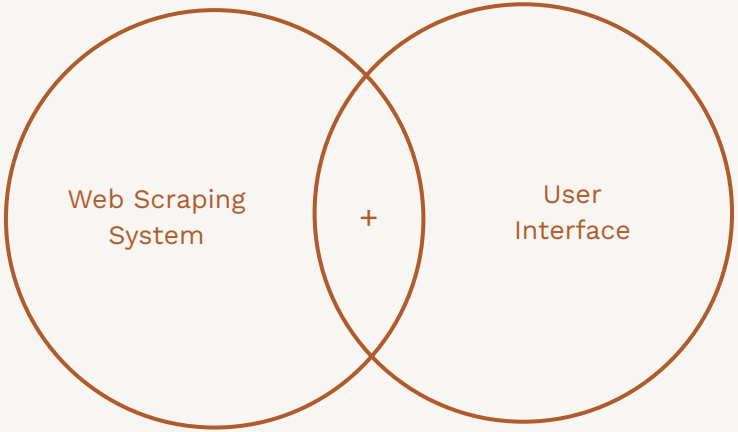
The Challenge

The Challenge

Design and implement a web scraping system and respective interface to keep track of product prices practiced across various stores and markets.

In its 1st stage, it should:

- collect data from **3 websites**...
- ...relating to **4 products**
- present collected data in a **user-friendly dashboard**



Strategy

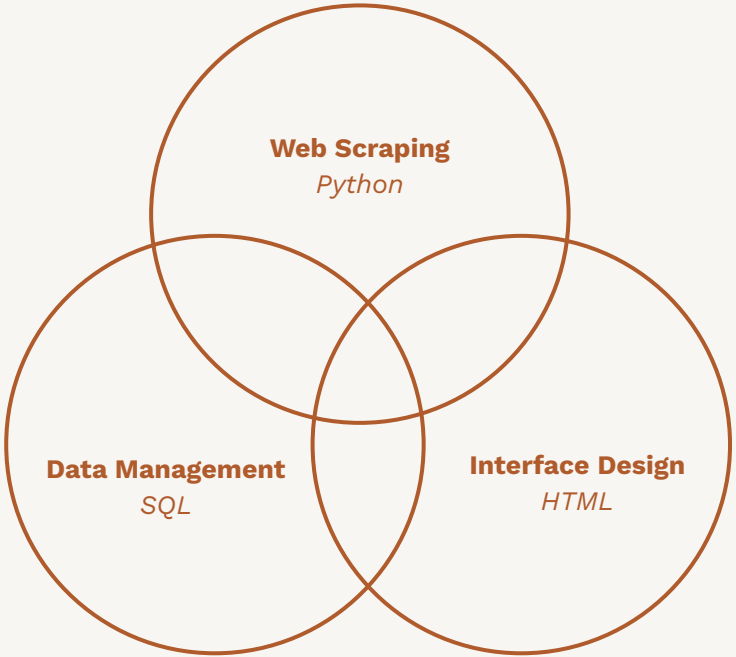
Allocating resources

We decided to subdivide the Team into three action fronts,

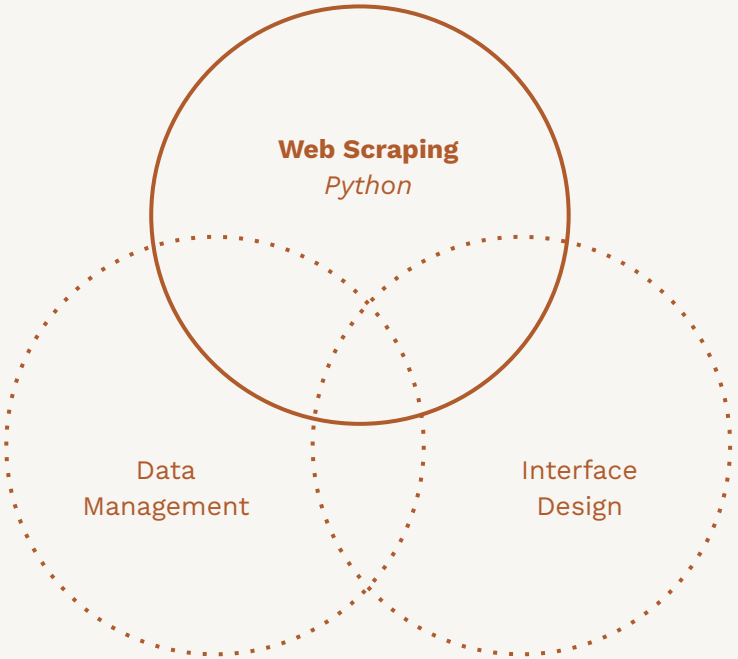
· **subdividing** a bigger problem into smaller and **more manageable** ones that could be **solved independently** and **simultaneously**

· **combining smaller solutions** in order to tackle the original challenge

· ensuring **constant communication** within the team so that **everything fits**



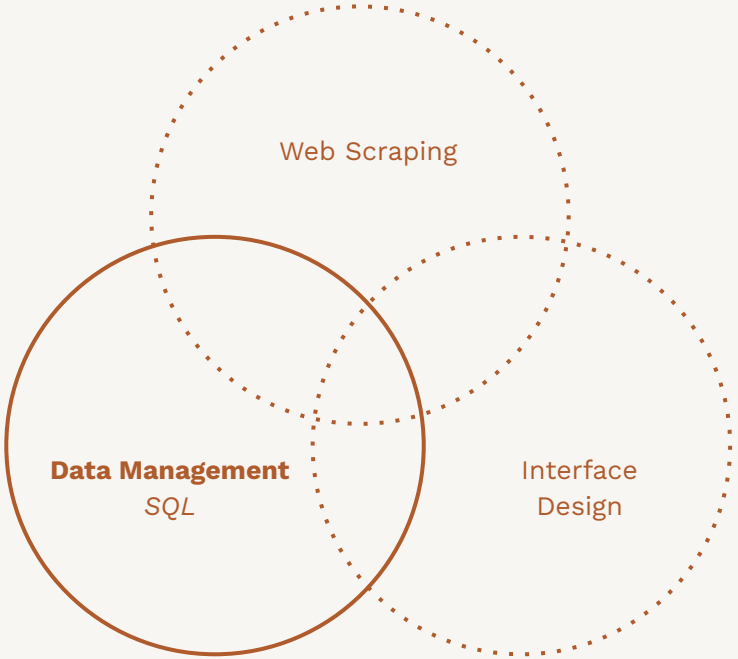
Web Scraping



- **data analysis**
  data → valuable insights
    - identify target website(s)
    - use locators to find relevant information in the HTML, different websites = different classes

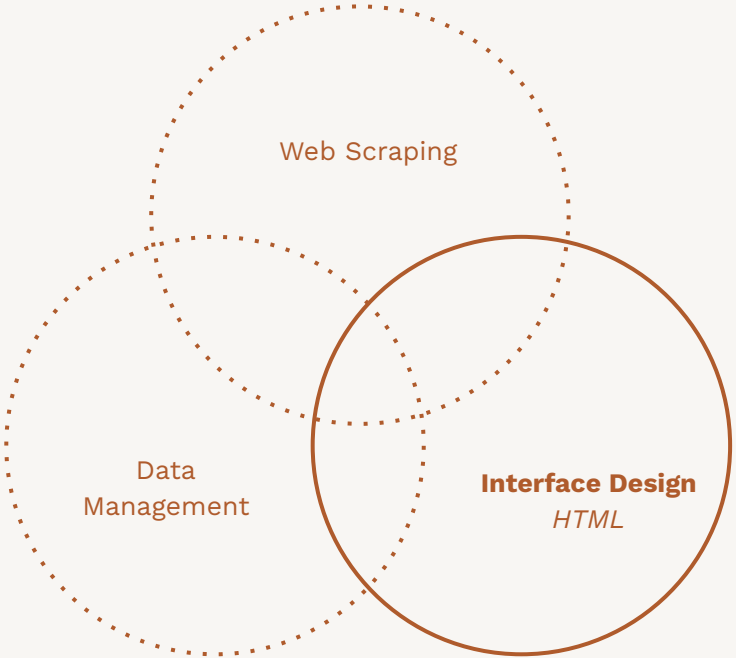
extracted data → delivered in structured format

Data Management



- **data storage, retrieval, management & manipulation**
  SQL ⇄ relational databases
    - standard & reliable
    - easily scalable, allowing room for future improvement

Interface Design



· **user interface**
user input ⇄ data visualization

support the effective functionality of website:

- facilitate interaction between (non-tech) user and program
- presenting data in a visual manner
- filter data

Current state

What we are currently delivering:

· automated tool, capable of filtering: product's name, retailer and location

· valuable & actionable data insights

· portable & compatible (website vs. app)

· intuitive user interface (accessible to non-tech profiles)

Next steps

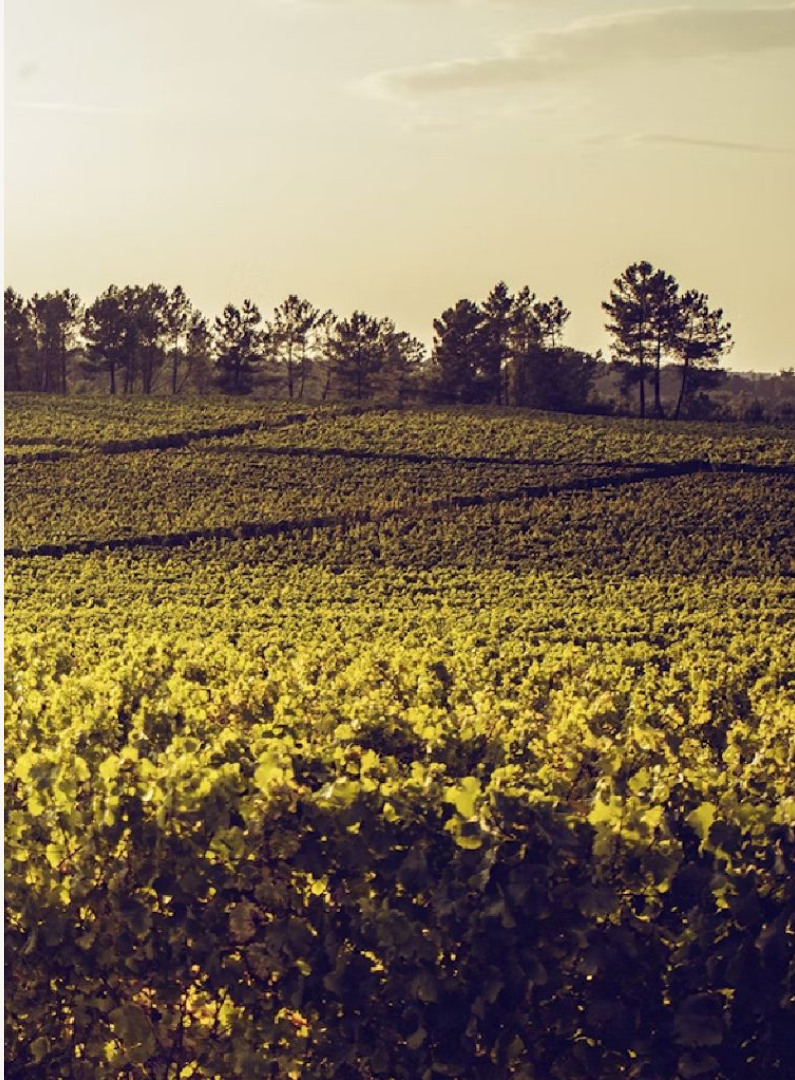
· adding more websites to scrape from

· filter data with more than one filter at once through the graphic interface

· include more filtering options

· add more visualization options (e.g. price fluctuation history graph), making data tracking more immediate

· allow the user to input data (e.g. product name) through text in a search bar, that will be useful when navigating bigger amounts of data



Thank you