

# Final Project Report

---

- Name: Wei Huo
- Section: 666
- Email: whuo1@jhu.edu

## Summary

This project is a meta-crawler specified in Option 4b: MetaShopper. It provides a search engine to acquire the information of merchandise which is ranked by price. Right now it only supports searching from Ebay and Amazon, but it is straightforward to extend to other shopping sites.

## Installation

1. Create a Python3 virtual environment in the folder and activate.

```
$ python3 -m venv venv  
$ source venv/bin/activate
```

2. Install dependencies from requirements.txt.

```
(venv)$ pip install -r requirements.txt
```

3. Run the app.

```
(venv)$ python app.py
```

4. Visit <http://127.0.0.1:5000/> in the browser.
5. Ready for search.

## Achievements

1. An user-friendly UI to help searching for the cheapest goods from Amazon and Ebay.
2. A crawler is implemented to extract desired information including images, names, links and prices, from the corresponding html files.
3. The results are ranked by their prices.
4. Can be adapted to support other shopping sites in a straightforward way.

## Limitation

1. It could only support Amazon and Ebay, which limits it's use in the real life.



2. The alignment in the html files is changing constantly such that a working extraction protocol right now won't be valid in the future.
3. Not all the shopping sites provide their information in a standard html file. Instead, they generate the information dynamically using javascript, which makes it really difficult to do the information extraction.
4. The searching result could better be ranked by other rules including like rate, relevance, etc.

## Sample outputs


### Your Shopping Helper

<input type="text" value="Search for the best price!!"/>			<input type="button" value="Search"/>
Image	Description	Price(\$)	
No data available			


### Your Shopping Helper

<input type="text" value="bed"/>			<input type="button" value="Search"/>
Image	Description	Price(\$)	
	<a href="#">Memory Foam Bed Pillows Serta Cooling Gel 2-pack Cluster Classic Standard</a> From eBay	18.99	
	<a href="#">PETMAKER Orthopedic Sherpa Top Pet Bed with Memory Foam and Removable Cover by</a> From Amazon	20.2	

[Back to home page](#) | Listed in category: [Home & Garden](#) > [Bedding](#) > [Bed Pillows](#) > [See more Serta 20x26" Gel Memory Foam Cluster Pillows - ...](#) [Add to watch](#)



**63¢ won't buy much these days...**  
but for 63¢ a day you can help rescue animals in distress.  
[MAKE A MONTHLY GIFT](#)



**Memory Foam Bed Pillows Serta Cooling Gel 2-pack Cluster Classic Standard**  
🔥 4 viewed per hour ★★★★★ 17 product ratings

Condition: **New with tags**  
Quantity:  5 available  
[622 sold](#) / [See feedback](#)

Price: **US \$18.99**

[Buy It Now](#)  
[Add to cart](#)  
[Add to watch list](#)

**100% buyer satisfaction**

622 sold


More than 98% sold

**Bucks** You'll earn **\$0.19** in eBay Bucks. [See conditions](#)

Shipping: **FREE** Economy Shipping | [See details](#)  
Domestic - Multiple Locations - United States

**Shop with confidence**  
eBay Money Back Guarantee  
Get the item you ordered or get your money back. [Learn more](#)

**Seller information**  
**roze\_1000** (638 ★)  
100% Positive feedback  
[Save this Seller](#)  
[Contact seller](#)  
[Visit store](#)  
[See other items](#)



**Don't let her live in fear.**  
Just 63¢ a day has