

fulltext Food Search Engine

START





Members

6488004 Kittipich Aiumbhorsin

6488089 Pattaravit Suksri

6488092 Thanaphat Sumrith

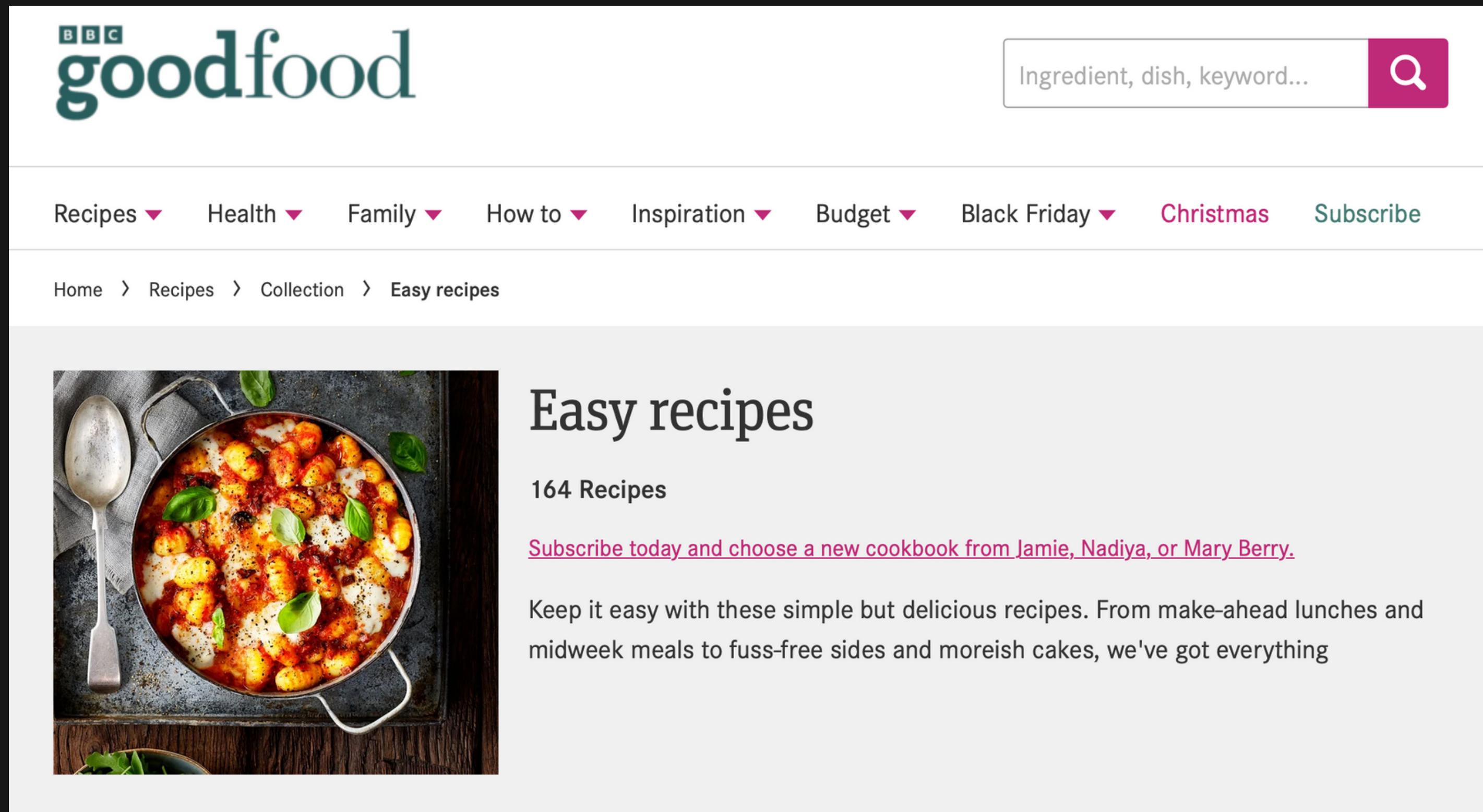


What Tools and software we use?

- Elasticsearch
- Flask
- Python3

WHERE WE GOT OUR DATA?

We've gathered data from “BBC food recipes”



The screenshot shows the BBC Good Food website interface. At the top left is the BBC Good Food logo. To its right is a search bar with the placeholder "Ingredient, dish, keyword..." and a pink search button with a magnifying glass icon. Below the search bar is a navigation menu with categories: Recipes ▾, Health ▾, Family ▾, How to ▾, Inspiration ▾, Budget ▾, Black Friday ▾, Christmas, and Subscribe. A breadcrumb navigation path is visible below the menu, showing Home > Recipes > Collection > Easy recipes. On the left side of the main content area is a photograph of a pan filled with gnocchi in a tomato sauce, garnished with basil leaves and cheese, with a spoon resting nearby. To the right of the image, the title "Easy recipes" is displayed in large, bold, dark font, followed by "164 Recipes". Below this, a call-to-action reads "Subscribe today and choose a new cookbook from Jamie, Nadiya, or Mary Berry." A descriptive paragraph follows, stating: "Keep it easy with these simple but delicious recipes. From make-ahead lunches and midweek meals to fuss-free sides and moreish cakes, we've got everything".

EXPLORER ... main.py M {} food.json 1 X __init__.py M elasticsearch_loader.py M ▶ 🔍 ⌂

Users > patchyy_ > Desktop > {} food.json > ...

```
1 {"name": "Gourmet Mushroom Risotto", "ID": "1001", "minutes": "45", "n_step": "8", "n_ingredient": "11", "ingredient": "[\"chicken broth\", \"olive oil\", \"portobello mushrooms\", \"onion\", \"garlic\", \"tomato sauce\", \"mushroom puree\", \"heavy cream\", \"cognac\", \"white wine\", \"black truffle oil\", \"salt\", \"pepper\"]"},  
2 {"name": "Chicken Alfredo Pasta", "ID": "1002", "minutes": "30", "n_step": "6", "n_ingredient": "9", "ingredient": "[\"fettuccine pasta\", \"boneless chicken breast\", \"parmesan cheese\", \"butter\", \"heavy cream\", \"garlic\", \"onion\", \"salt\", \"pepper\", \"black pepper\"]"},  
3 {"name": "Vegetarian Thai Green Curry", "ID": "1003", "minutes": "40", "n_step": "7", "n_ingredient": "12", "ingredient": "[\"tofu\", \"green curry paste\", \"coconut milk\", \"lime juice\", \"red onion\", \"garlic\", \"chili\", \"cucumber\", \"carrots\", \"kale\", \"basil\", \"fish sauce\", \"sugar\", \"salt\", \"pepper\"]"},  
4 {"name": "Spaghetti Bolognese", "ID": "1004", "minutes": "35", "n_step": "5", "n_ingredient": "10", "ingredient": "[\"ground beef\", \"onion\", \"garlic\", \"tomato sauce\", \"red wine\", \"bacon\", \"cheese\", \"basil\", \"oregano\", \"salt\", \"pepper\"]"},  
5 {"name": "Grilled Lemon Herb Chicken", "ID": "1005", "minutes": "25", "n_step": "4", "n_ingredient": "8", "ingredient": "[\"chicken breasts\", \"lemon\", \"olive oil\", \"garlic\", \"herbs\", \"salt\", \"pepper\", \"black pepper\", \"lemon juice\"]"},  
6 {"name": "Shrimp and Vegetable Stir-Fry", "ID": "1006", "minutes": "20", "n_step": "5", "n_ingredient": "9", "ingredient": "[\"shrimp\", \"broccoli\", \"bell peppers\", \"zucchini\", \"onion\", \"garlic\", \"soy sauce\", \"sriracha\", \"salt\", \"pepper\"]"},  
7 {"name": "Caprese Salad", "ID": "1007", "minutes": "15", "n_step": "3", "n_ingredient": "6", "ingredient": "[\"tomatoes\", \"fresh mozzarella\", \"fresh basil\", \"balsamic vinegar\", \"olive oil\", \"salt\", \"pepper\"]"},  
8 {"name": "Beef and Vegetable Stir-Fry", "ID": "1008", "minutes": "30", "n_step": "6", "n_ingredient": "11", "ingredient": "[\"beef sirloin strips\", \"broccoli\", \"carrots\", \"zucchini\", \"onion\", \"garlic\", \"soy sauce\", \"sriracha\", \"salt\", \"pepper\", \"black pepper\"]"},  
9 {"name": "Vegetarian Quinoa Salad", "ID": "1009", "minutes": "25", "n_step": "4", "n_ingredient": "9", "ingredient": "[\"quinoa\", \"cherry tomatoes\", \"cucumber\", \"red onion\", \"garlic\", \"olive oil\", \"salt\", \"pepper\", \"black pepper\", \"lemon juice\"]"},  
10 {"name": "Mango Salsa Chicken", "ID": "1010", "minutes": "40", "n_step": "5", "n_ingredient": "10", "ingredient": "[\"chicken thighs\", \"mango\", \"red onion\", \"jalape\u00f1o\", \"lime juice\", \"cumin\", \"coriander\", \"salt\", \"pepper\", \"black pepper\", \"olive oil\"]"},  
11 {"name": "Lemon Garlic Roasted Vegetables", "ID": "1011", "minutes": "35", "n_step": "4", "n_ingredient": "8", "ingredient": "[\"potatoes\", \"carrots\", \"broccoli\", \"asparagus\", \"onion\", \"garlic\", \"olive oil\", \"salt\", \"pepper\", \"black pepper\"]"},  
12 {"name": "Sushi Rolls (Maki)", "ID": "1012", "minutes": "60", "n_step": "7", "n_ingredient": "10", "ingredient": "[\"sushi rice\", \"nori seaweed\", \"fish (salmon, tuna)\", \"avocado\", \"cucumber\", \"carrots\", \"onion\", \"garlic\", \"sriracha\", \"wasabi\", \"olive oil\"]"},  
13 {"name": "Ramen Noodle Soup", "ID": "1013", "minutes": "45", "n_step": "5", "n_ingredient": "11", "ingredient": "[\"ramen noodles\", \"chicken or pork broth\", \"chashu pork\", \"scallions\", \"onion\", \"garlic\", \"sriracha\", \"wasabi\", \"olive oil\", \"salt\", \"pepper\", \"black pepper\"]"},  
14 {"name": "Tempura", "ID": "1014", "minutes": "40", "n_step": "6", "n_ingredient": "8", "ingredient": "[\"shrimp\", \"vegetables (sweet potato, zucchini)\", \"tempura batter\", \"egg wash\", \"olive oil\"]"},  
15 {"name": "Teriyaki Chicken", "ID": "1015", "minutes": "35", "n_step": "4", "n_ingredient": "7", "ingredient": "[\"chicken thighs\", \"soy sauce\", \"mirin\", \"sake\", \"brown sugar\", \"garlic\", \"onion\", \"salt\", \"pepper\", \"black pepper\"]"},  
16 {"name": "Miso Soup", "ID": "1016", "minutes": "20", "n_step": "3", "n_ingredient": "7", "ingredient": "[\"dashi (fish and seaweed stock)\", \"miso paste\", \"tofu\", \"green onions\", \"scallions\", \"onion\", \"garlic\", \"sriracha\", \"wasabi\", \"olive oil\"]"},  
17 {"name": "Okonomiyaki (Japanese Pancake)", "ID": "1017", "minutes": "30", "n_step": "5", "n_ingredient": "9", "ingredient": "[\"cabbage\", \"flour\", \"eggs\", \"bacon or sausage\", \"onion\", \"garlic\", \"sriracha\", \"wasabi\", \"olive oil\", \"salt\", \"pepper\", \"black pepper\"]"},  
18 {"name": "Sashimi", "ID": "1018", "minutes": "20", "n_step": "2", "n_ingredient": "5", "ingredient": "[\"fresh raw fish (salmon, tuna)\", \"soy sauce\", \"wasabi\", \"pickled ginger\", \"sriracha\", \"olive oil\"]"},  
19 {"name": "Yakitori (Grilled Chicken Skewers)", "ID": "1019", "minutes": "25", "n_step": "4", "n_ingredient": "8", "ingredient": "[\"chicken thighs\", \"soy sauce\", \"mirin\", \"garlic\", \"onion\", \"salt\", \"pepper\", \"black pepper\", \"charcoal\"]"},  
20 {"name": "Matcha Green Tea Ice Cream", "ID": "1020", "minutes": "60", "n_step": "4", "n_ingredient": "5", "ingredient": "[\"heavy cream\", \"whole milk\", \"sugar\", \"matcha powder\", \"vanilla extract\", \"salt\", \"pepper\"]"},  
21 {"name": "Paella", "ID": "1021", "minutes": "50", "n_step": "6", "n_ingredient": "12", "ingredient": "[\"short-grain rice\", \"chicken thighs\", \"chorizo sausage\", \"shrimp\", \"scallions\", \"onion\", \"garlic\", \"olive oil\", \"salt\", \"pepper\", \"black pepper\", \"paprika\"]"},  
22 {"name": "Pad Thai", "ID": "1022", "minutes": "30", "n_step": "5", "n_ingredient": "9", "ingredient": "[\"rice noodles\", \"shrimp\", \"tofu\", \"bean sprouts\", \"eggs\", \"peanut butter\", \"sriracha\", \"wasabi\", \"olive oil\", \"salt\", \"pepper\", \"black pepper\"]"},  
23 {"name": "Beef Stroganoff", "ID": "1023", "minutes": "40", "n_step": "5", "n_ingredient": "8", "ingredient": "[\"beef sirloin\", \"onion\", \"mushrooms\", \"beef broth\", \"heavy cream\", \"olive oil\", \"salt\", \"pepper\", \"black pepper\", \"paprika\"]"},  
24 {"name": "Chicken Tikka Masala", "ID": "1024", "minutes": "50", "n_step": "5", "n_ingredient": "9", "ingredient": "[\"chicken thighs\", \"yogurt\", \"tomato sauce\", \"cream\", \"cumin\", \"coriander\", \"garlic\", \"onion\", \"salt\", \"pepper\", \"black pepper\", \"olive oil\"]"},  
25 {"name": "Goulash", "ID": "1025", "minutes": "120", "n_step": "4", "n_ingredient": "8", "ingredient": "[\"beef stew meat\", \"onions\", \"bell peppers\", \"tomatoes\", \"paprika\", \"garlic\", \"onion\", \"salt\", \"pepper\", \"black pepper\", \"olive oil\"]"},  
26 {"name": "Ceviche", "ID": "1026", "minutes": "20", "n_step": "3", "n_ingredient": "7", "ingredient": "[\"white fish\", \"lime juice\", \"red onion\", \"tomatoes\", \"cilantro\", \"scallions\", \"onion\", \"garlic\", \"sriracha\", \"wasabi\", \"olive oil\"]"},  
27 {"name": "Moussaka", "ID": "1027", "minutes": "90", "n_step": "5", "n_ingredient": "10", "ingredient": "[\"eggplant\", \"ground lamb or beef\", \"onions\", \"tomatoes\", \"olive oil\", \"salt\", \"pepper\", \"black pepper\", \"paprika\", \"cinnamon\", \"garlic\"]"},  
28 {"name": "Kimchi Fried Rice", "ID": "1028", "minutes": "25", "n_step": "4", "n_ingredient": "8", "ingredient": "[\"cooked rice\", \"kimchi\", \"bacon\", \"carrots\", \"green onions\", \"garlic\", \"sriracha\", \"olive oil\", \"salt\", \"pepper\", \"black pepper\"]"},  
29 {"name": "Greek Salad", "ID": "1029", "minutes": "15", "n_step": "3", "n_ingredient": "7", "ingredient": "[\"cucumbers\", \"tomatoes\", \"red onion\", \"feta cheese\", \"Kalamata olives\", \"olive oil\", \"salt\", \"pepper\", \"black pepper\", \"olive oil\"]"},  
30 {"name": "Tuna Poke Bowl", "ID": "1030", "minutes": "20", "n_step": "4", "n_ingredient": "8", "ingredient": "[\"sushi rice\", \"fresh tuna\", \"avocado\", \"cucumber\", \"onion\", \"garlic\", \"sriracha\", \"wasabi\", \"olive oil\", \"salt\", \"pepper\", \"black pepper\"]"}  
31
```

Search Page



Insert any words in the search box.

A single word query

Results from searching a single-word : "rice".

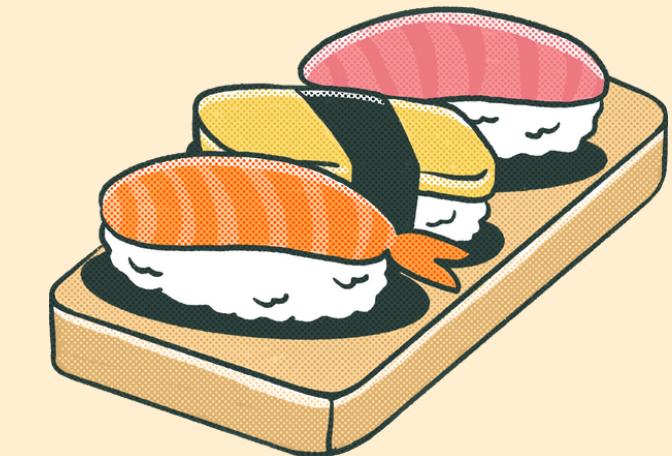


Search Results for "rice"

Page item order	Title	Descriptions	Region	Details
1	Paella	A Spanish one-pan dish with a rich combination of rice, seafood, and meats.	Spanish	link
2	Kimchi Fried Rice	A Korean dish featuring fried rice with kimchi, vegetables, and a savory sauce, often topped with a fried egg.	Korean	link
3	Matcha Green Tea Ice Cream	Creamy and flavorful green tea ice cream made with matcha powder.	Japanese	link
4	Tuna Poke Bowl	A bowl of sushi rice topped with fresh tuna, avocado, cucumber, and a flavorful soy-sesame dressing.	Hawaiian	link
5	Sushi Rolls (Maki)	Create your own sushi rolls with a variety of fresh ingredients.	Japanese	link

Multi-word query

Results from searching a multi-word ("Japanese food").

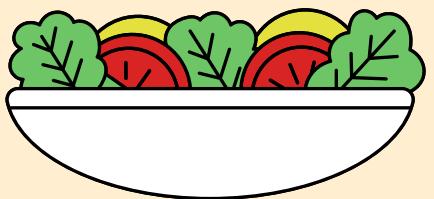
A screenshot of a search interface. At the top is a green search bar containing the text "Japanese food". To the right of the search bar is a white magnifying glass icon. Below the search bar is a grey background area.

Search Results for "Japanese food"

Page item order	Title	Descriptions	Region	Details
1	Yakitori (Grilled Chicken Skewers)	Juicy grilled chicken skewers with a sweet and savory glaze.	Japanese	link
2	Yakitori (Grilled Chicken Skewers)	Juicy grilled chicken skewers with a sweet and savory glaze.	Japanese	link
3	Okonomiyaki (Japanese Pancake)	Savory Japanese pancake with a variety of toppings.	Japanese	link
4	Okonomiyaki (Japanese Pancake)	Savory Japanese pancake with a variety of toppings.	Japanese	link
5	Chicken Alfredo Pasta	Creamy Alfredo pasta with tender chicken breast, a perfect comfort dish.	Italian	link

Partial Match

Result from system response to a partial query, like query "sala" for "salad"



Search Results for "sala"

Page item order	Title	Descriptions	Region	Details
1	Mango Salsa Chicken	Sweet and spicy mango salsa served over grilled chicken thighs.	Mexican	link
2	Mango Salsa Chicken	Sweet and spicy mango salsa served over grilled chicken thighs.	Mexican	link
3	Caprese Salad	A refreshing salad featuring tomatoes, fresh mozzarella, and basil drizzled with balsamic glaze.	Italian	link
4	Greek Salad	A refreshing salad featuring crisp vegetables, feta cheese, olives, and a drizzle of olive oil.	Greek	link
5	Caprese Salad	A refreshing salad featuring tomatoes, fresh mozzarella, and basil drizzled with balsamic glaze.	Italian	link

Demonstration of our search engine system



TECHNICAL DIFFICULTIES AND CHALLENGES



INTEGRATION WITH ELASTICSEARCH

- Challenge: SSL/TLS setups.
- Lesson Learned: Elasticsearch setup.



FLASK APPLICATION SETUP AND ROUTING

- Challenge: Configuring the Flask application correctly.
- Lesson Learned: Web server configuration.



USER INTERFACE AND EXPERIENCE

- Challenge: User-friendly interface
- Lesson Learned: To improve user experience and user design.



ERROR HANDLING AND DEBUGGING

- Challenge: Error handling with search requests, Elasticsearch interactions, and Troubleshooting Flask routing and Elasticsearch queries.
- Lesson Learned: Error handling and debugging procedures.



THANK YOU!

