

JSON-LD

The Secret Code Behind Search Magic

By Shehroz Ahmed

Introduction

- Have you ever wondered how Google shows extra details with search results e.g. ratings, prices, and times?
- What is this extra information?
- A product HAS price.
- A product HAS ratings.
- A restaurant HAS opening and closing times.



Rawlings 2 Pack
Competition...
\$34.99



rebel
and 5+ stores



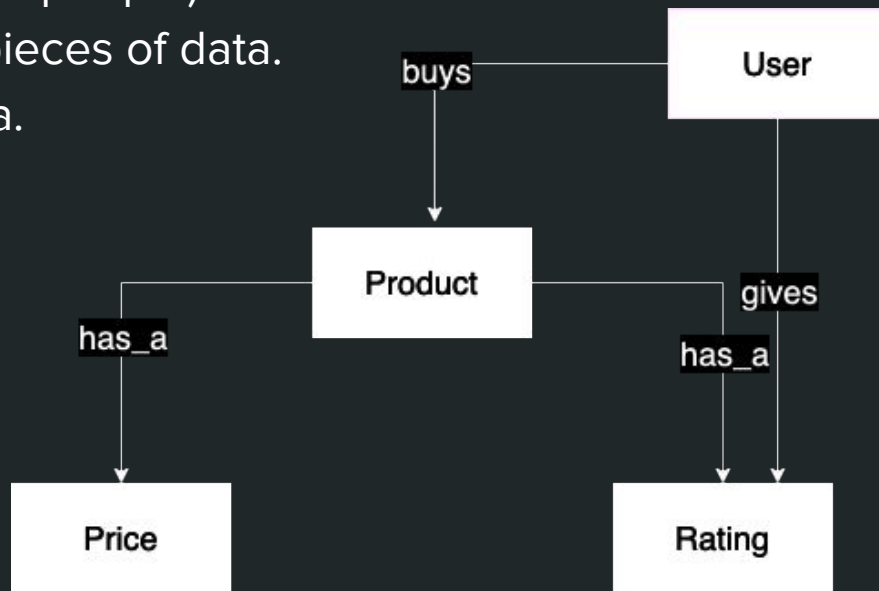
Kipsta Baseball
Ba180 2 Pack
\$30.00



Bunnings Ware...
and 2+ stores

Links, links, everywhere!

- This data that in the combination of (Subject, Predicate, Object) makes a triple.
- It helps us establish links between concepts.
- Making it easier for machines (and people) to understand and use the relationships between different pieces of data.
- Therefore, it is called Linked Data.



JSON-LD

- JSON-LD (JavaScript Object Notation for Linked Data) is a lightweight, easy-to-read format for structuring data on the web.
- Looks like a JSON object.
- Helps search engines understand content context.
- Improved Search Visibility: Allows for rich search results.
- Connects information across the web.

Importance of JSON-LD

- Without JSON-LD, the internet would feel much less connected, intelligent, and helpful.
- Every smart detail you see in a search result today owes something to JSON-LD and linked data.

JSON-LD In Action

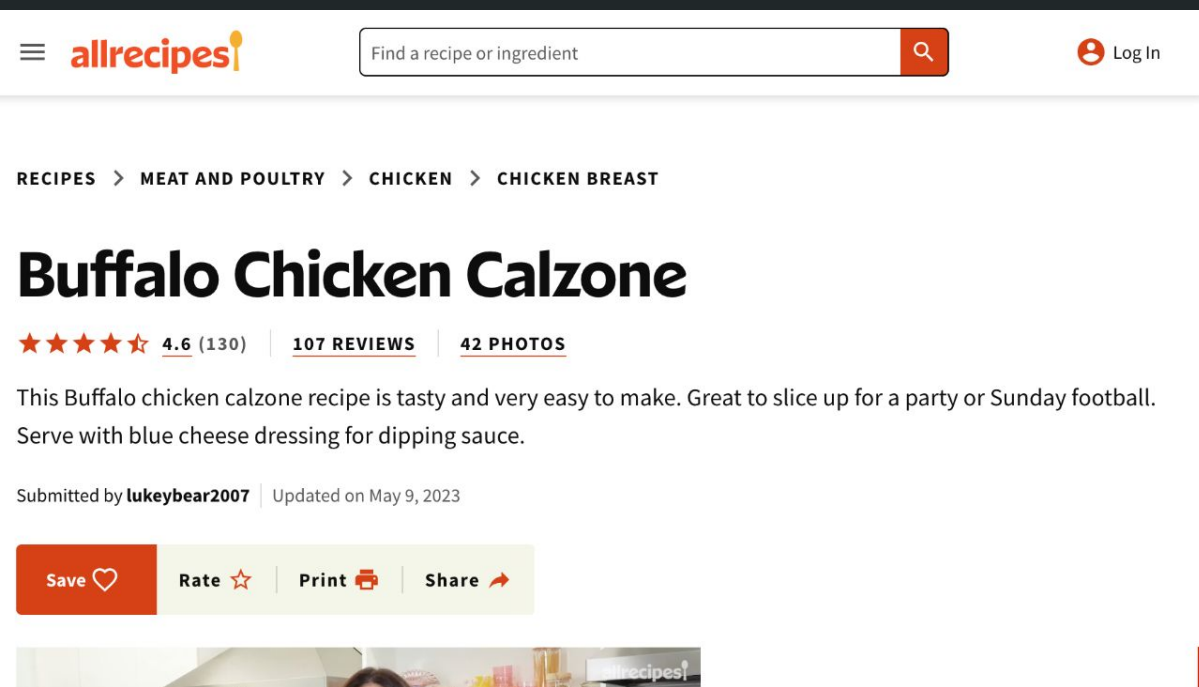
- How does the Google know?
- It cannot scrape a billion sites each built differently.
- Websites embed JSON-LD in them as a script which stores the data regarding to that specific page/product/recipe etc.
- Search engines just read those JSONs.
- Can be found by searching 'application/ld+json' in inspect element.

The screenshot shows a Google search for "buffalo chicken calzone". The search results include a featured recipe from Allrecipes and a list of three other recipes. Red boxes and circles highlight JSON-LD data embedded in the page, such as ratings, review counts, and cooking times.

Search Results:

- Featured Recipe:** Buffalo Chicken Calzone Recipe (Allrecipes). Rating: 4.6 stars (130 reviews). Cooking time: 55 mins.
- Recipe List:**
 - Buffalo Chicken Calzone** (Allrecipes): 4.6 stars (130 reviews), 55 mins. Ingredients: Boneless chicken breast, refrigerated pizza dough.
 - Buffalo Chicken Calzones** (Food & Wine): No reviews, 45 mins. Ingredients: Blue cheese dressing, rotisserie chicken, pizza dough, buffalo.
 - Buffalo Chicken Calzone Recipe** (Kitchen Swagger): 5.0 stars (1 review), 45 mins. Ingredients: Blue cheese dressing, crispy chicken tenders, pizza dough.

JSON-LD In Action (cont.)



allrecipes Find a recipe or ingredient Log In

RECIPES > MEAT AND POULTRY > CHICKEN > CHICKEN BREAST

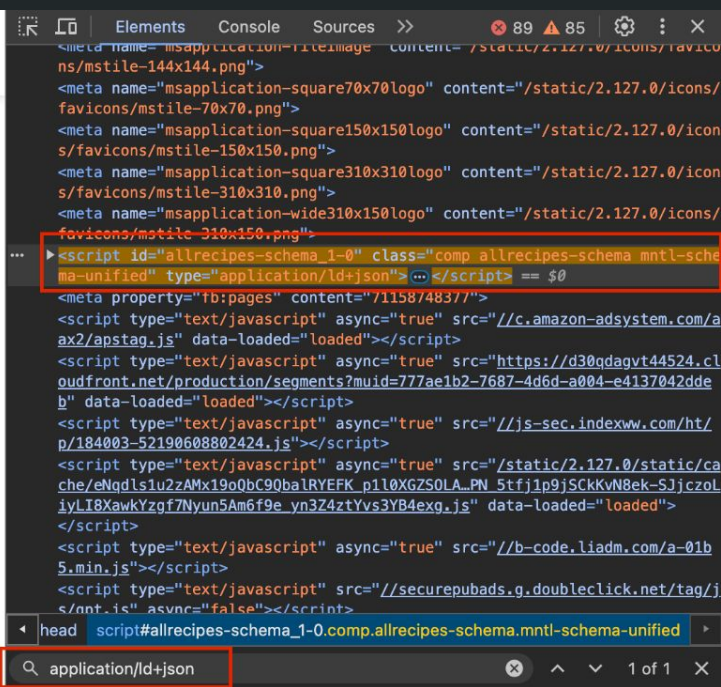
Buffalo Chicken Calzone

★★★★☆ 4.6 (130) | 107 REVIEWS | 42 PHOTOS

This Buffalo chicken calzone recipe is tasty and very easy to make. Great to slice up for a party or Sunday football. Serve with blue cheese dressing for dipping sauce.

Submitted by **lukeybear2007** | Updated on May 9, 2023

Save Rate Print Share



```
<script id="allrecipes-schema_1-0" class="comp allrecipes-schema mntl-schema-unified" type="application/ld+json">== $0</script>
```

application/ld+json

JSON-LD In Action (cont.)

```
]
}
,"name": "Buffalo Chicken Calzone"
,"aggregateRating": {
"@type": "AggregateRating",
"ratingValue": "4.6",
"ratingCount": "130"
}
,"cookTime": "PT35M"
,"nutrition": {
"@type": "NutritionInformation"
,"calories": "572 kcal"
,"carbohydrateContent": "38 g"
```

```
,"text": "Bake in the preheated oven until c
} ]
,"recipeYield": ["4"]
,"totalTime": "PT55M"
,"review": [
{
"@type": "Review"
```

```
,"recipeIngredient": [
"1 pound skinless, boneless chicken breast halves",
"2 tablespoons butter",
"0.25 cup Buffalo wing sauce",
"1 refrigerated pizza dough",
"2 tablespoons vegetable oil, divided",
"2 cups shredded mozzarella cheese" ]
,"recipeInstructions": [
```


JSON-LD And Beyond

- The use of JSON-LD is not limited to enhancing web results and fetching extra details(linked data) about an item on the web.
- Semantic Web is a vision of web where data is structured and linked in a way that makes it meaningful and understandable to both humans and machines.
- JSON-LD contributes to this idea by providing structured data in a readable format.
- Linked Data in general has potential applications in ML, where it can be used to create structured knowledge bases for AI to better understand context, relationships and concepts across the data.

The End