

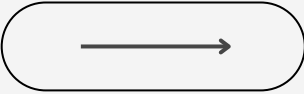
DATE

23/09/2024



DORAEMON GADGETS

Search Engine for Doraemon Gadgets



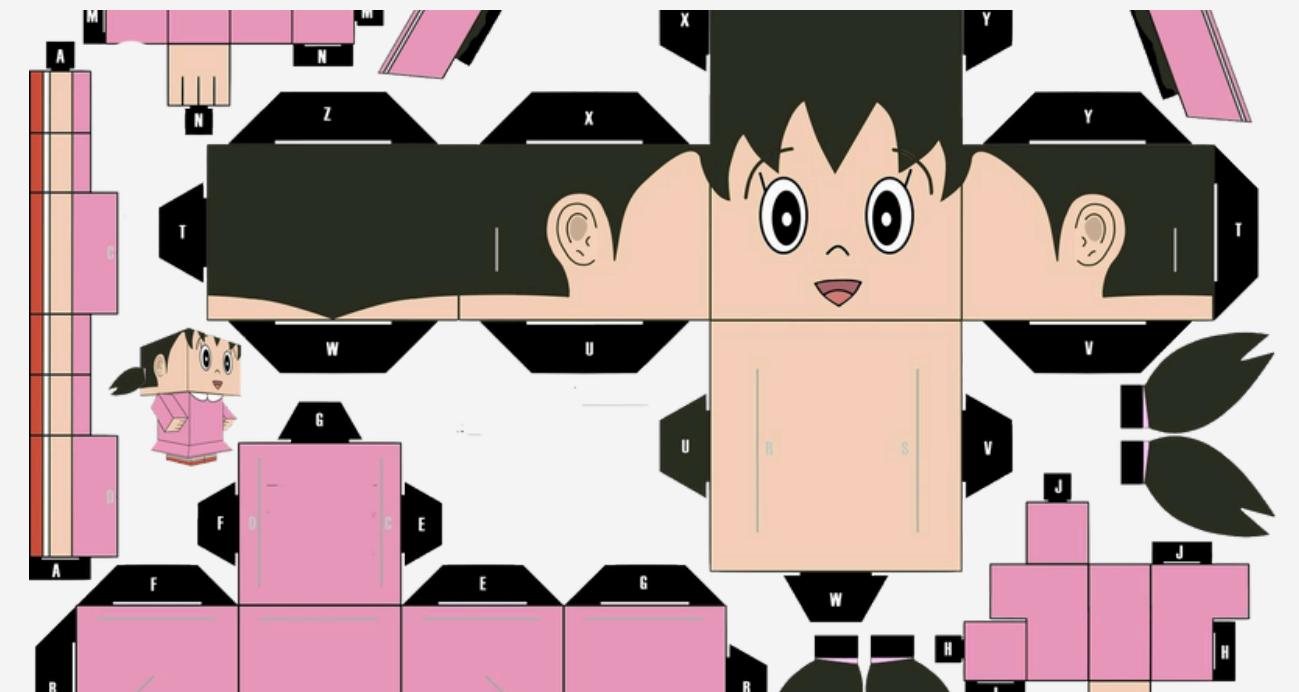
NAME OF COMPANY
BbGarPun

PRESENTED BY
Bb, Garfield, P' Mhee

TARGET USER GROUPS

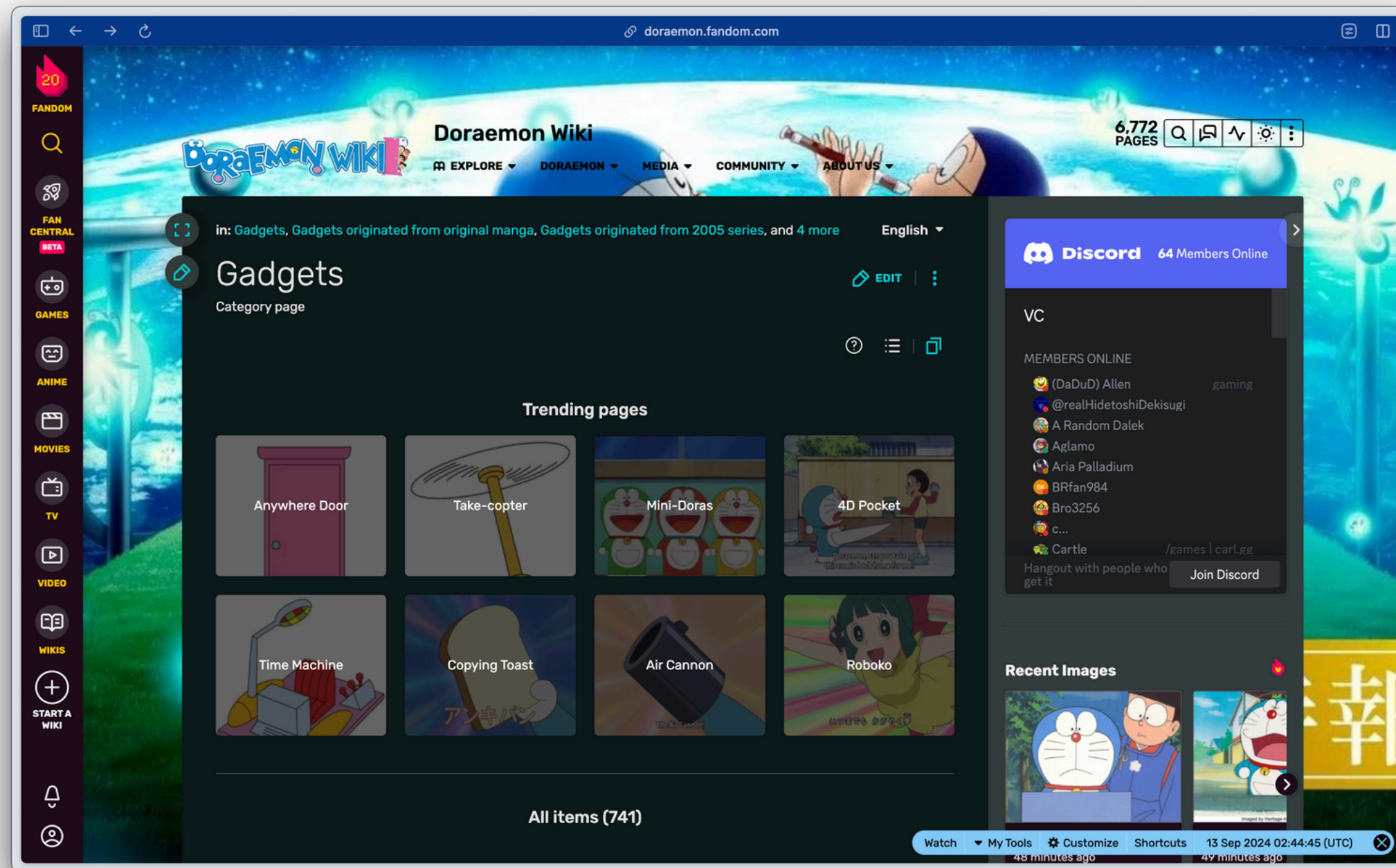
1

- Doraemon Fans
- Toy Manufacturers and Product Designers
- Anime and Manga Collectors



DATA SOURCE

2



```
data
{ } A.json
{ } B.json
{ } C.json
{ } D.json
{ } E.json
{ } F.json
{ } G.json
{ } H.json
{ } I.json
{ } J.json
{ } K.json
{ } L.json
{ } M.json
{ } N.json
{ } O.json
{ } P.json
{ } Q.json
{ } R.json
{ } S.json
{ } T.json
{ } U.json
{ } V.json
{ } W.json
{ } X.json
{ } Y.json
```

Web Crawling

- Approximately 700 total number of Doraemon's gadgets.
- Use GO-Colly library for crawling

source: <https://doraemon.fandom.com/wiki/Category:Gadgets?from=<A-Z>>

DATA SAMPLE (1ST DRAFT)

```
{
  "eng_name": "Abekobe Cream",
  "jp_name": "あべこべクリーム Abekobe Kurīmu",
  "function": "When applied to the skin, any hot or cold sensation the skin felt will be the opposite. For example, if a person applied the Abekobe Cream to their skin, and they",
  "appears_in": [
    "Chapter 14: Hot Hot in the Snow",
    "Doraemon: Nobita's New Great Adventure into the Underworld Ⅱ The Seven Magic Users",
    "The Snow's Hot, Hot, Hot!",
    "Move Fast, Doraemon! The Galactic Grandprix",
    "Kobe Abe (gadget)",
    "Abekonbe",
    "Nobi Nobita",
    "Special:Categories",
    "Category: Cream gadgets",
    "Category: Gadgets",
    "Category: Gadgets originated from original manga"
  ],
  "image_url": "https://static.wikia.nocookie.net/doraemon/images/b/b3/Abeko_Cream.png/revision/latest/scale-to-width-down/350?cb=20150824074408\u0026path-prefix=en"
},
```

DEFECTS

DATA PRE-PROCESSING

- Remove any data that containing null (inconsistent data)
- Splits text a word boundaries
- Removes punctuation.
- Lowercases letters with the lowercase token filter
- Tokenization

part of
Elasticsearch's
analyzer

```
POST _analyze
{
  "analyzer": "standard",
  "text": "Move Fast, Doraemon! The Galactic Grandprix"
}
```

request

```
{
  "tokens" : [
    {
      "token" : "move",
      "start_offset" : 0,
      "end_offset" : 4,
      "type" : "<ALPHANUM>",
      "position" : 0
    },
    {
      "token" : "fast",
      "start_offset" : 5,
      "end_offset" : 9,
      "type" : "<ALPHANUM>",
      "position" : 1
    },
    {
      "token" : "doraemon",
      "start_offset" : 11,
      "end_offset" : 19,
      "type" : "<ALPHANUM>",
      "position" : 2
    },
    {
      "token" : "the",
      "start_offset" : 21,
      "end_offset" : 24,
      "type" : "<ALPHANUM>",
      "position" : 3
    },
    {
      "token" : "galactic",
      "start_offset" : 25,
      "end_offset" : 33,
      "type" : "<ALPHANUM>",
      "position" : 4
    },
    {
      "token" : "grandprix",
      "start_offset" : 34,
```

response

DOCUMENTS INDEXING

- Using Elasticsearch as a tool for search engine
- Using Kibana as a search engine GUI
- Dynamic Mapping from JSON import
 - Detect and add fields and their data types to the index as new documents are ingested
 - Result in index (similar to a table's schema in a relational database)



ELASTICSEARCH



KIBANA

```
GET products/_mapping
```

request

```
{
  "products" : {
    "mappings" : {
      "_meta" : {
        "created_by" : "file-data-visualizer"
      },
      "properties" : {
        "created" : {
          "type" : "keyword"
        },
        "description" : {
          "type" : "text"
        },
        "in_stock" : {
          "type" : "long"
        },
        "is_active" : {
          "type" : "boolean"
        },
        "name" : {
          "type" : "text"
        },
        "price" : {
          "type" : "long"
        },
        "sold" : {
          "type" : "long"
        },
        "tags" : {
          "type" : "keyword"
        }
      }
    }
  }
}
```

response

ELASTICSEARCH INDEX SAMPLE

products

Search field names

Filter by type0

Available fields12

f_id

f_index

#_score

f_type

f_created

f_description

#in_stock

is_active

f_name

#price

#sold

f_tags

1,000 hits

Document

> created: 2007/10/14 description: Pellentesque at nulla. Suspendisse potenti. Cras in purus eu magna vulputate luctus. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Vivamus vestibulum sagittis sapien. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Etiam vel augue. Vestibulum rutrum rutrum neque. Aenean auctor gravida sem. in_stock: 10 is_active: true name: Tart Shells - Savory price: 99 sold: 430 _id: pnNP-pEB43o9BhZoIxGg _index: products _score: 1 _type: _doc

> created: 2000/11/17 description: In eleifend quam a odio. in_stock: 24 is_active: true name: Kirsch - Schloss price: 25 sold: 215 _id: p3NP-pEB43o9BhZoIxGg _index: products _score: 1 _type: _doc

> created: 2008/08/17 description: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin risus. Praesent lectus. Vestibulum quam sapien, varius ut, blandit non, interdum in, ante. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Duis faucibus accumsan odio. Curabitur convallis. Duis consequat dui nec nisi volutpat eleifend. Donec ut dolor. in_stock: 37 is_active: false name: Coffee - Colombian Portioned price: 37 sold: 477 tags: Coffee _id: qHNP-pEB43o9BhZoIxGg _index: products _score: 1 _type: _doc

> created: 2002/04/26 description: Etiam pretium iaculis justo. In hac habitasse platea dictumst. Etiam faucibus cursus urna. Ut tellus. in_stock: 24 is_active: false name: Venison - Liver price: 87 sold: 261 _id: qXNP-pEB43o9BhZoIxGg _index: products _score: 1 _type: _doc

> created: 2011/11/06 description: Donec ut mauris eget massa tempor convallis. Nulla neque libero, convallis eget, eleifend luctus, ultricies eu, nibh. Quisque id justo sit amet sapien dignissim vestibulum. in_stock: 23 is_active: true name: Nestea - Iced Tea price: 121 sold: 431 _id: qnNP-pEB43o9BhZoIxGg _index: products _score: 1 _type: _doc

> created: 2008/09/20 description: Aliquam erat volutpat. In congue. Etiam justo. Etiam pretium iaculis justo. In hac habitasse platea dictumst. Etiam faucibus cursus urna. Ut tellus. Nulla ut erat id mauris vulputate elementum. in_stock: 25 is_active: false name: Beets - Pickled price: 172 sold: 290 _id: q3NP-pEB43o9BhZoIxGg _index: products _score: 1 _type: _doc

> created: 2017/05/17 description: Duis consequat dui nec nisi volutpat eleifend. Donec ut dolor. Morbi vel lectus in quam fringilla rhoncus. Mauris enim leo, rhoncus sed, vestibulum sit amet, cursus id, turpis. in_stock: 25 is_active: false name: Energy Drink Red Bull price: 153 sold: 6 tags: Energy drink _id: rHNP-pEB43o9BhZoIxGg _index: products _score: 1 _type: _doc

> created: 2005/08/01 description: Ut at dolor quis odio consequat varius. Integer ac leo. Pellentesque ultrices mattis odio. Donec vitae nisi. Nam ultrices, libero non mattis pulvinar, nulla pede ullamcorper augue, a suscipit nulla elit ac nulla. Sed vel enim sit amet nunc viverra dapibus. Nulla suscipit ligula in lacus. Curabitur at ipsum ac tellus semper interdum. Mauris ullamcorper purus sit amet nulla. Quisque arcu libero, rutrum ac, lobortis vel, dapibus at, diam. in_stock: 22 is_active: false name: Onions - Green price: 105 sold: 199 tags: Vegetable _id: rXNP-pEB43o9BhZoIxGg _index: products _score: 1 _type: _doc

> created: 2006/12/26 description: In sagittis dui vel nisl. Duis ac nibh. Fusce lacus purus, aliquet at, feugiat non, pretium quis, lectus. Suspendisse potenti. in_stock: 25 is_active: true name: Ecolab - Hobart Washarm End Cap price: 24 sold: 96 _id: rnNP-pEB43o9BhZoIxGg _index: products _score: 1 _type: _doc

> created: 2015/03/09 description: Nulla ut erat id mauris vulputate elementum. Nullam varius. Nulla facilisi. Cras non velit nec nisi vulputate nonummy. in_stock: 4 is_active: true name: Tuna - Salad Premix price: 147

DOCUMENTS RANKING

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- Similarity (scoring / ranking model)
 - Okapi BM25 algorithm (default)
 - TF-IDF like retrieval functions used in document retrieval

```
GET products/_search
{
  "query": {
    "match": {
      "description": "montes"
    }
  }
}
```

request

```
{
  "took" : 6,
  "timed_out" : false,
  "_shards" : {
    "total" : 1,
    "successful" : 1,
    "skipped" : 0,
    "failed" : 0
  },
  "hits" : {
    "total" : {
      "value" : 49,
      "relation" : "eq"
    },
    "max_score" : 4.0865407,
    "hits" : [
      {
        "_index" : "products",
        "_type" : "_doc",
        "_id" : "2XNP-pER43o9BhZoIxGg",
        "_score" : 4.0865407,
        "_source" : {
          "name" : "Shrimp - 100 / 200 Cold Water",
          "price" : 124,
          "in_stock" : 22,
          "sold" : 97,
          "tags" : [
            "Meat"
          ],
          "description" : "Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Vivamus vestibulum sagittis sapien. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Etiam vel augue. Vestibulum rutrum rutrum neque.",
          "is_active" : true,
          "created" : "2007/11/28"
        }
      },
      {
        "_index" : "products",
        "_type" : "_doc",

```

response



THANK YOU

Search Engine for Doraemon Gadgets

MEMBER

6588150 Bhurinat Kanchanasuwan

6588142 Punnut Sawetwannakul

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