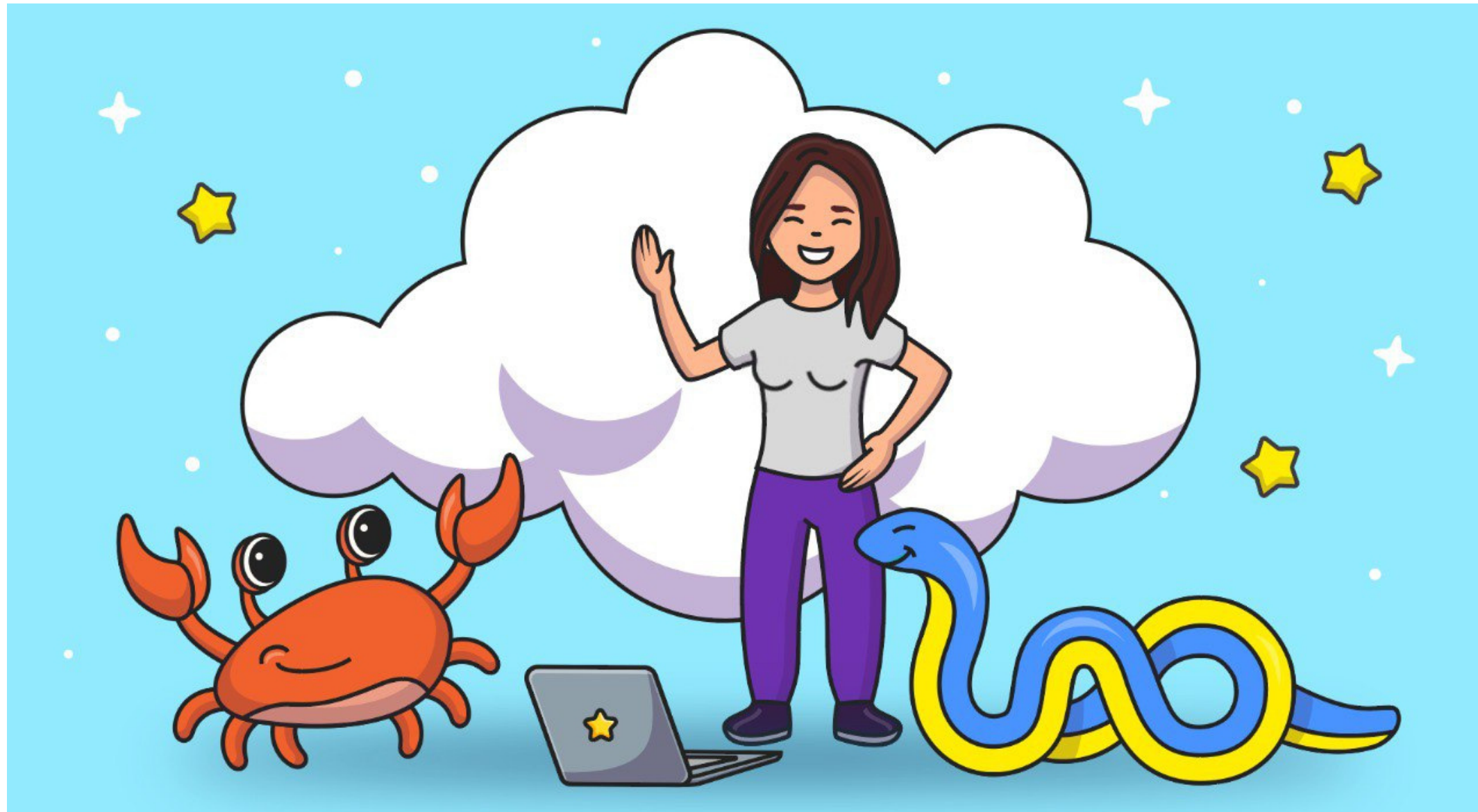


# SUPER SEARCH WITH OPENSEARCH & PYTHON



by @laysaucha

# self.intro()



@aiven\_io

**AIVEN**

**OSS DATABASES**

**PYLADIES MUNICH**



@laysaucha

# Agenda

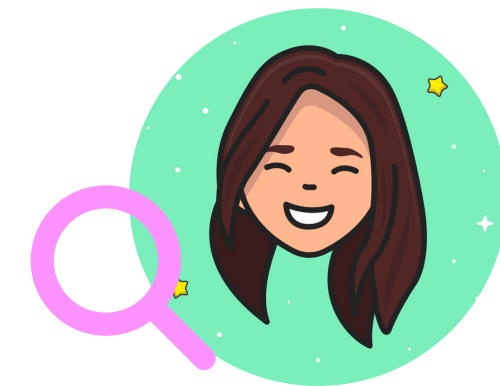
WHAT IS OPENSEARCH?



WHY OPENSEARCH?



SEARCH QUERIES/DEMO

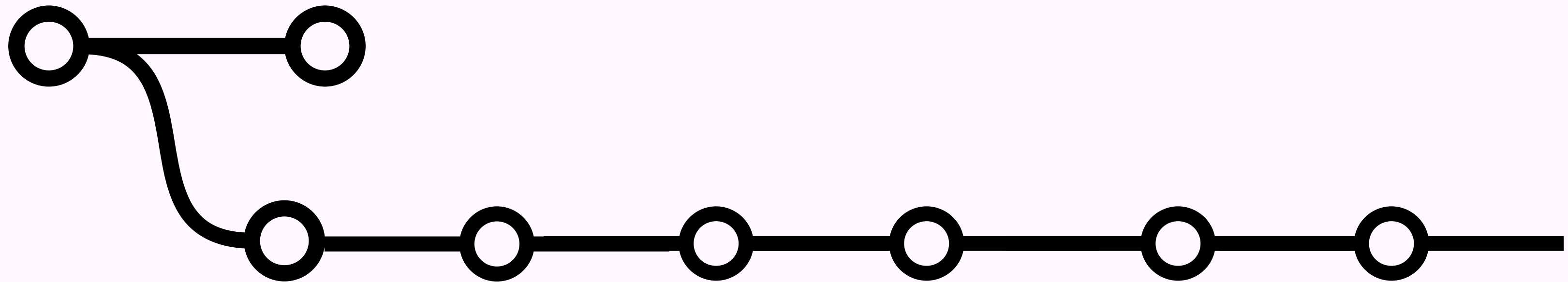


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# WHAT?

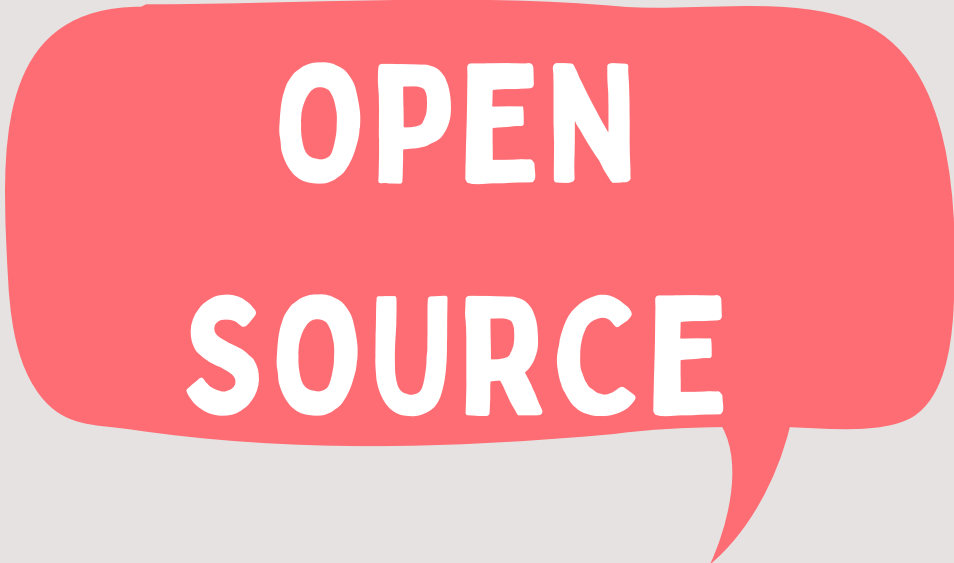


Elasticsearch v7.10




OpenSearch v1.0.0

v2.0.0



**OPEN  
SOURCE**



**SEARCH  
ENGINE**



**REST API**



**LANGUAGE  
SUPPORT**



**ANALYTICS  
SUITE**



**LOG  
ANALYTICS**

# WHY ?



# Super Powers



# Super Powers



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# Super Powers

Multilingual

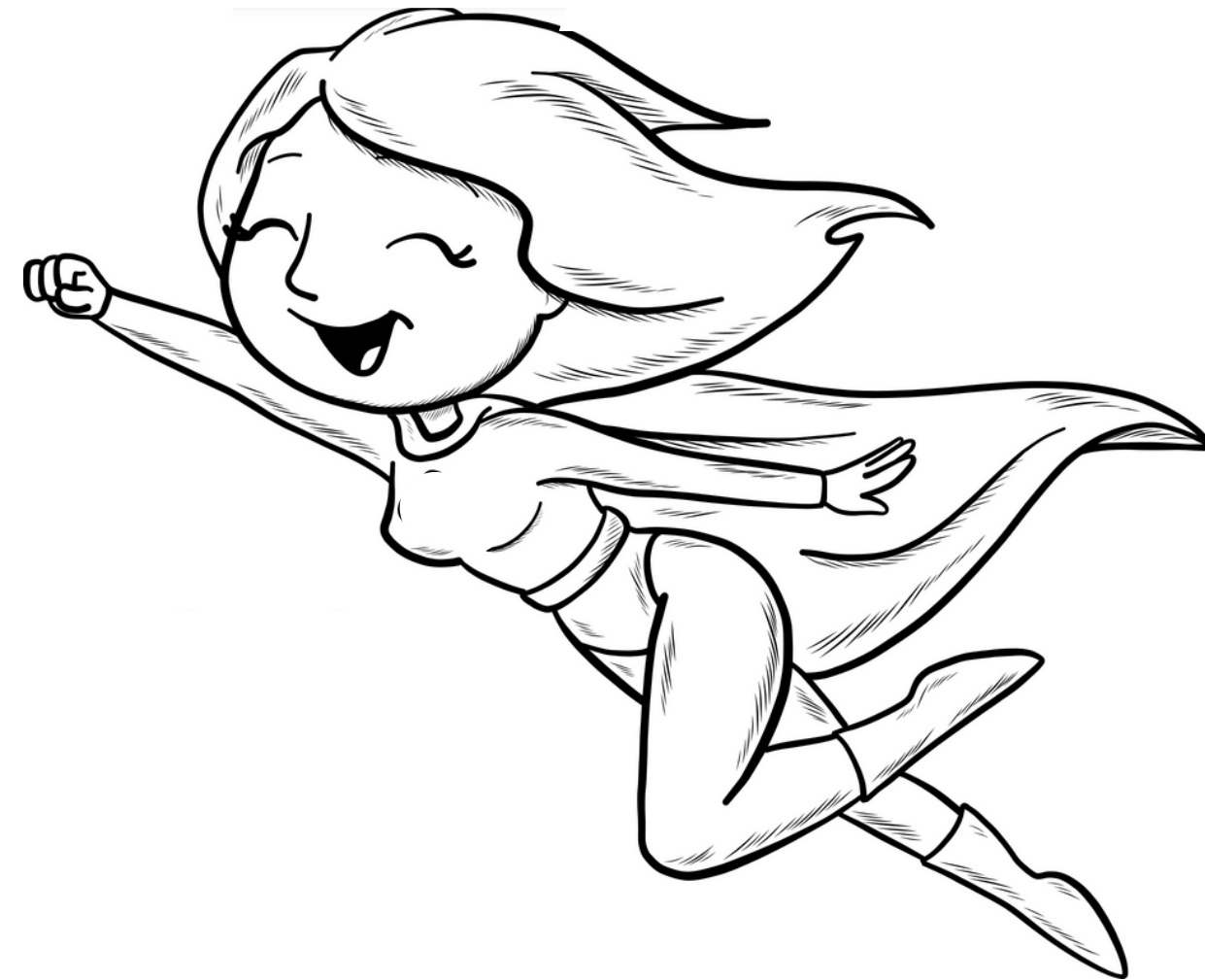


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# Super Powers

Multilingual

Autocompletion



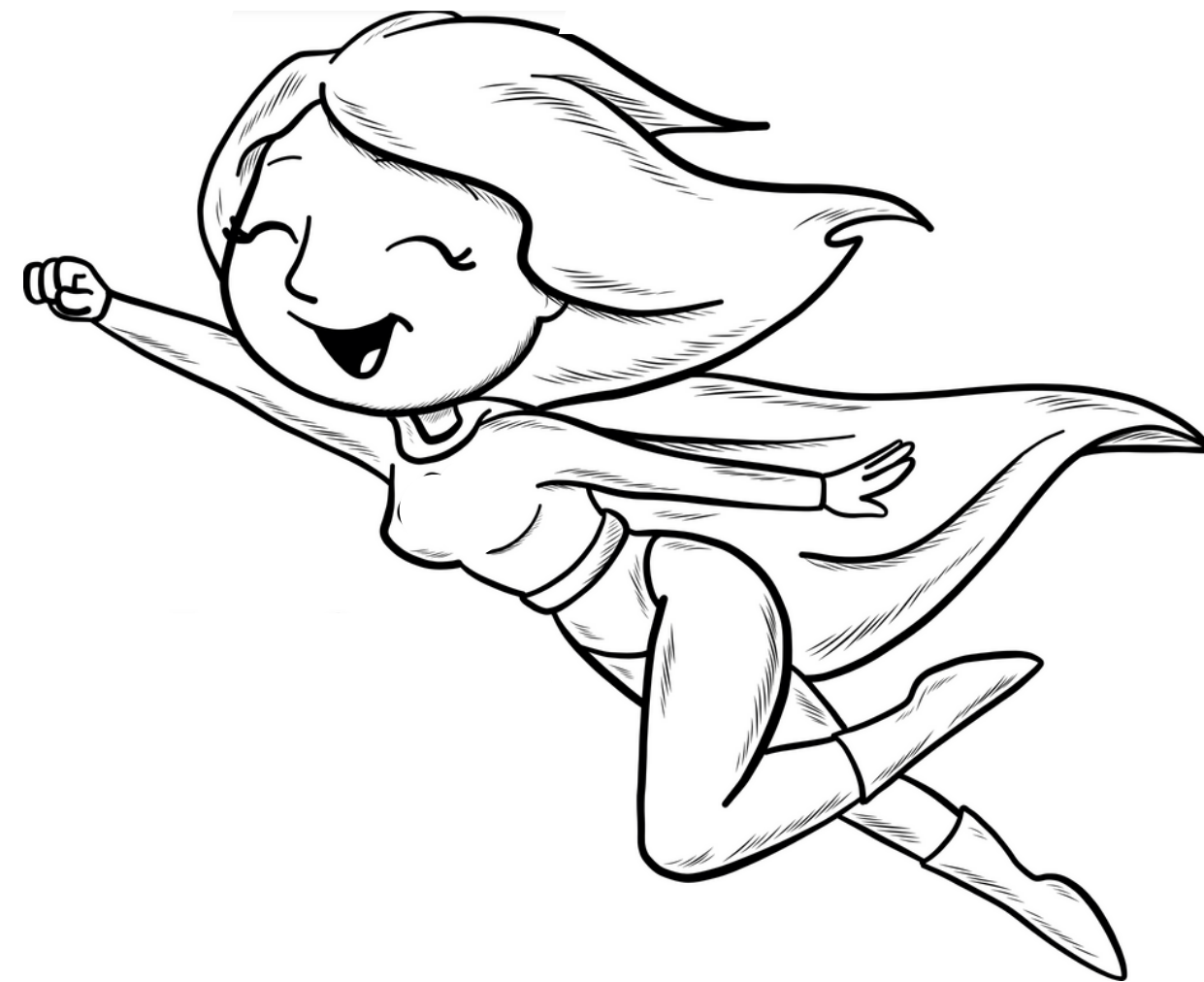
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# Super Powers

Multilingual

Autocompletion

Fuzzy searching



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# Super Powers

Multilingual

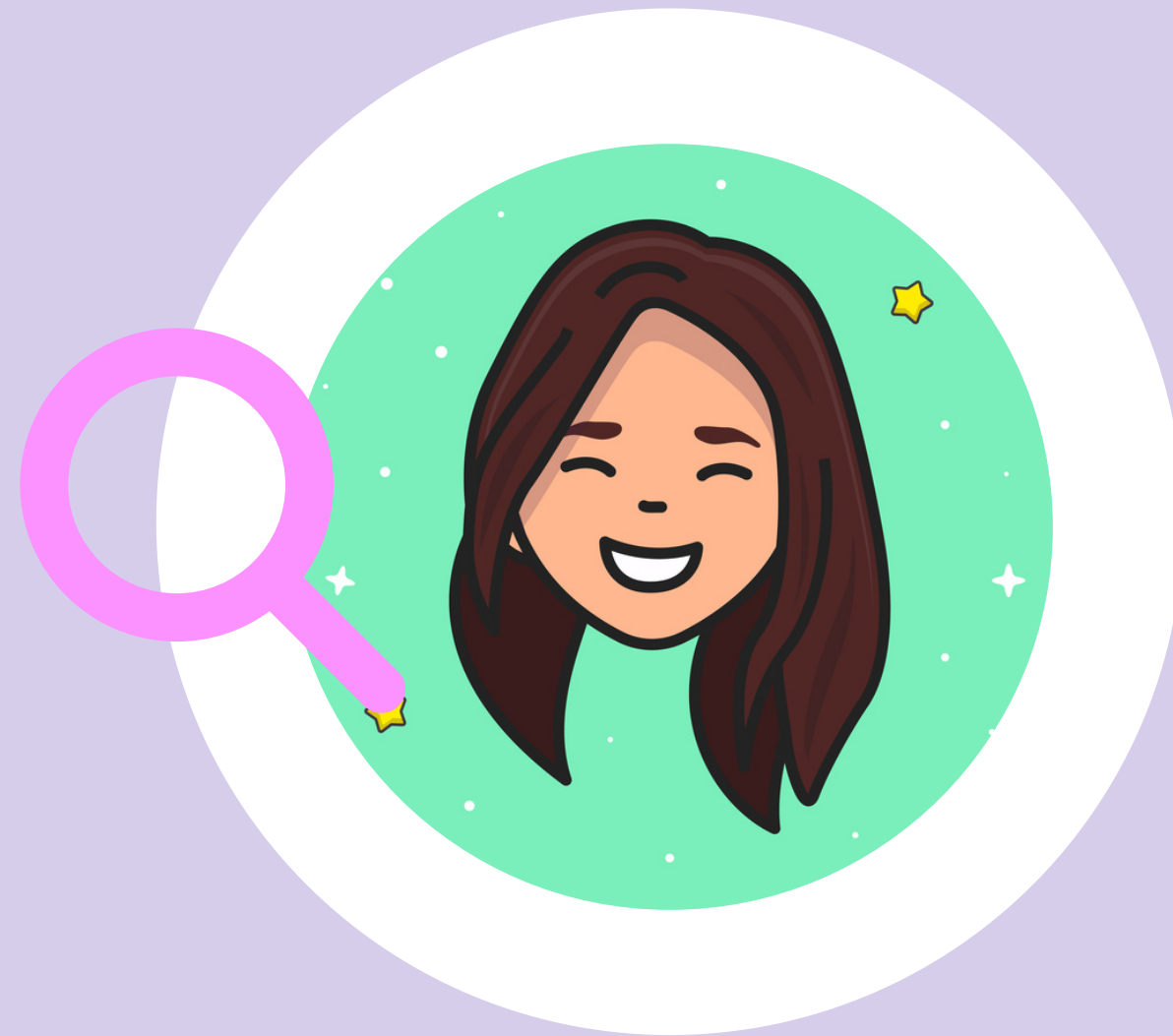
Autocompletion

Fuzzy searching

Dynamic mapping



# SEARCH



# Demo

PYTHON

OPENSEARCH

LOTS OF DATA



[GitHub repository](#)

laysauchoa/**opensearch-  
python-dive-in**

OpenSearch queries in Python





```
{  
  "directions":["Prepare"],  
  "fat":0,  
  "date":"2006-10-17T19:51:11.000Z",  
  "categories":["quick labels"],  
  "calories":1000,  
  "desc":"description",  
  "protein":0,  
  "rating":3.75,  
  "title":"Mango and Melon Dessert ",  
  "ingredients":["things you need"],  
  "sodium":0  
}
```



MATCH

```
client.search(
```

```
)
```

```
client.search(  
  index="recipes",
```

```
)
```

```
client.search(  
  index="recipes",  
  body= {
```

```
  }  
)
```

```
client.search(  
  index="recipes",  
  body= {  
    "query": {  
      }  
    }  
  )
```

```
client.search(  
  index="recipes",  
  body= {  
    "query": {  
      "<query-type>": {  
  
    }  
  }  
)
```

```
client.search(  
  index="recipes",  
  body= {  
    "query": {  
      "match": {  
  
  
    }  
  }  
)
```

```
client.search(  
  index="recipes",  
  body= {  
    "query": {  
      "match": {  
        <field-name> : {  
  
      }  
    }  
  }  
)
```



```
client.search(  
  index="recipes",  
  body= {  
    "query": {  
      "match": {  
        "title": {  
  
  
        }  
      }  
    }  
  }  
)
```

```
client.search(  
  index="recipes",  
  body= {  
    "query": {  
      "match": {  
        "title": {  
          "query": <your-search> ,  
          "operator": <AND/OR>  
        }  
      }  
    }  
  )
```

```
client.search(  
  index="recipes",  
  body= {  
    "query": {  
      "match": {  
        "title": {  
          "query": "Chocolate Garlic",  
          "operator": "AND"
```

```
        }  
      }  
    }  
  )  
}
```

'Chocolate-Garlic Mojo with Toasted Cuban Bread'

Laysa

Mayra



Mayra

Laysa



MATCH

PHRASE

'Pineapple Ice-Cream Cake with Coconut Topping'

Pos 1

Pos 2

Pos 3

Doc:

Cake

with

Coconut

Pos 1

Pos 2

Pos 3

Doc:

Cake

with

Coconut

Query:

Cake

coconut



Pos 1

Pos 2

Pos 3

Doc:

Cake

with

Coconut

Query:

Cake

coconut

Slop 1:

Pos 1

Pos 2

Pos 3

Doc:

Cake

with

coconut

Query:

Cake

coconut

Slop 1:

Cake

↳

coconut

|         | Pos 1 | Pos 2   | Pos 3   |
|---------|-------|---------|---------|
| Doc:    | Cake  | with    | coconut |
| Query:  | Cake  | coconut |         |
| Slop 1: | Cake  | ↳       | coconut |

'Cake with Coconut'

'Coconut Cake'

Pos 1

Pos 2

Doc:

Coconut

Cake

Query:

Cake

Coconut

Pos 1

Pos 2

Doc:

Coconut

Cake

Query:

Cake

Coconut

Slop 2:

Coconut (1) ←

Pos 1

Pos 2

Doc:

Coconut

Cake

Query:

Cake

Coconut

Slop 2:

Coconut (1)



Cake (2)

Pos 1

Pos 2

Doc:

Coconut

Cake

Query:

Cake

Coconut

Slop 2:

Coconut (1)



Cake (2)

'Coconut Cake'



FUZZINESS



s o u p

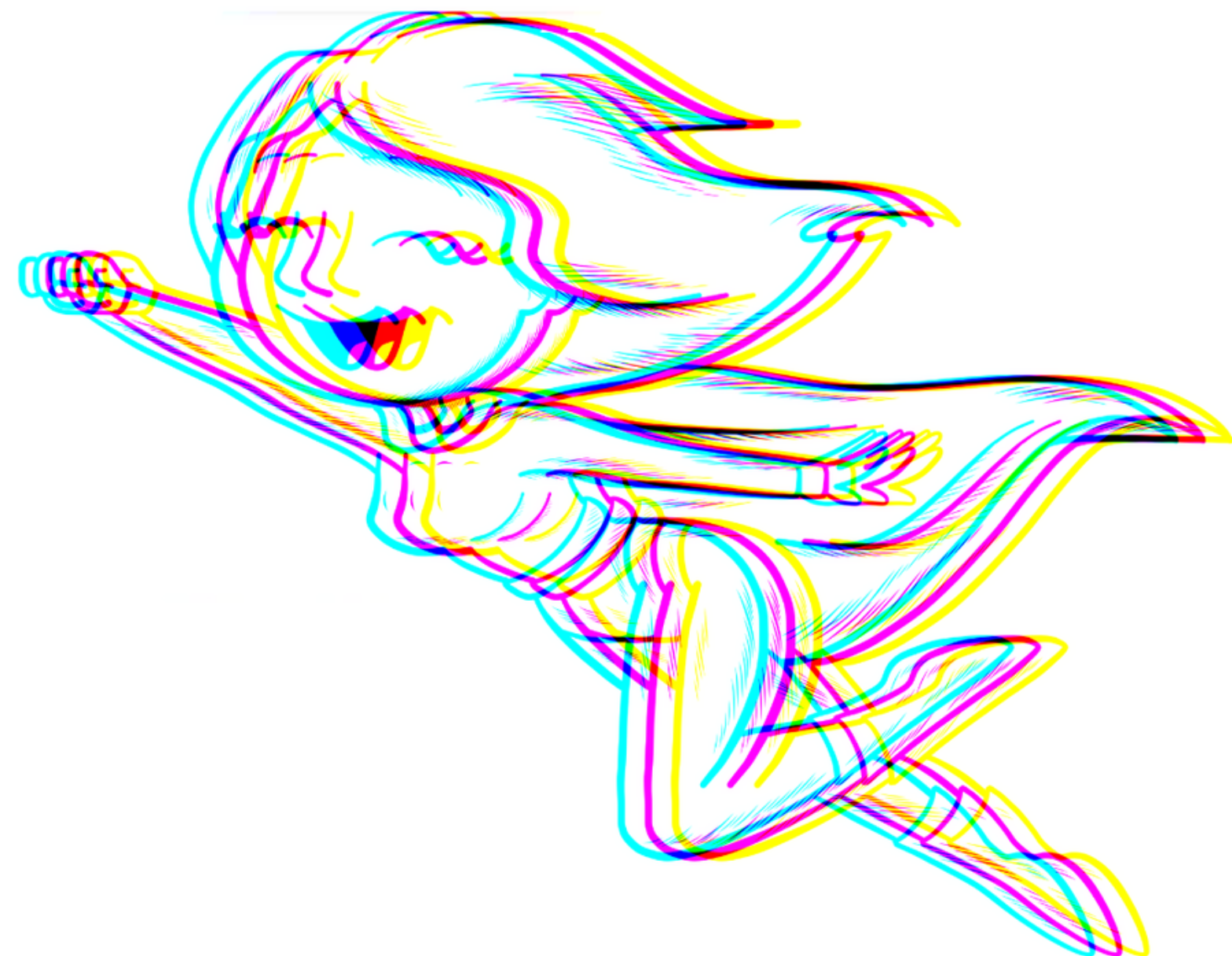
s o a p

d e s e r t

d e s s e r t

a c t

c a t



s o u p

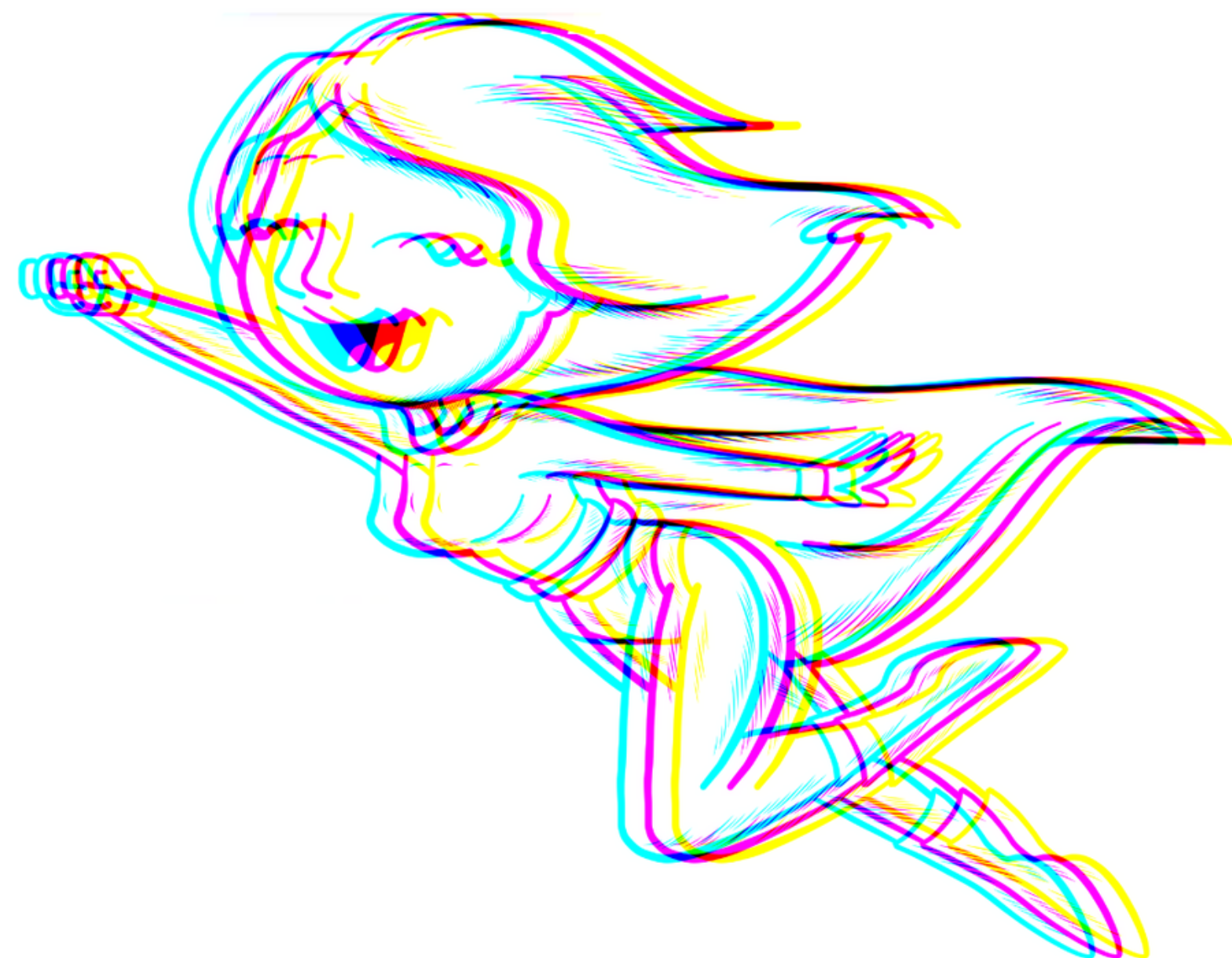
s o a p

d e s **s** e r t

d e s e r t

a c t

c a t

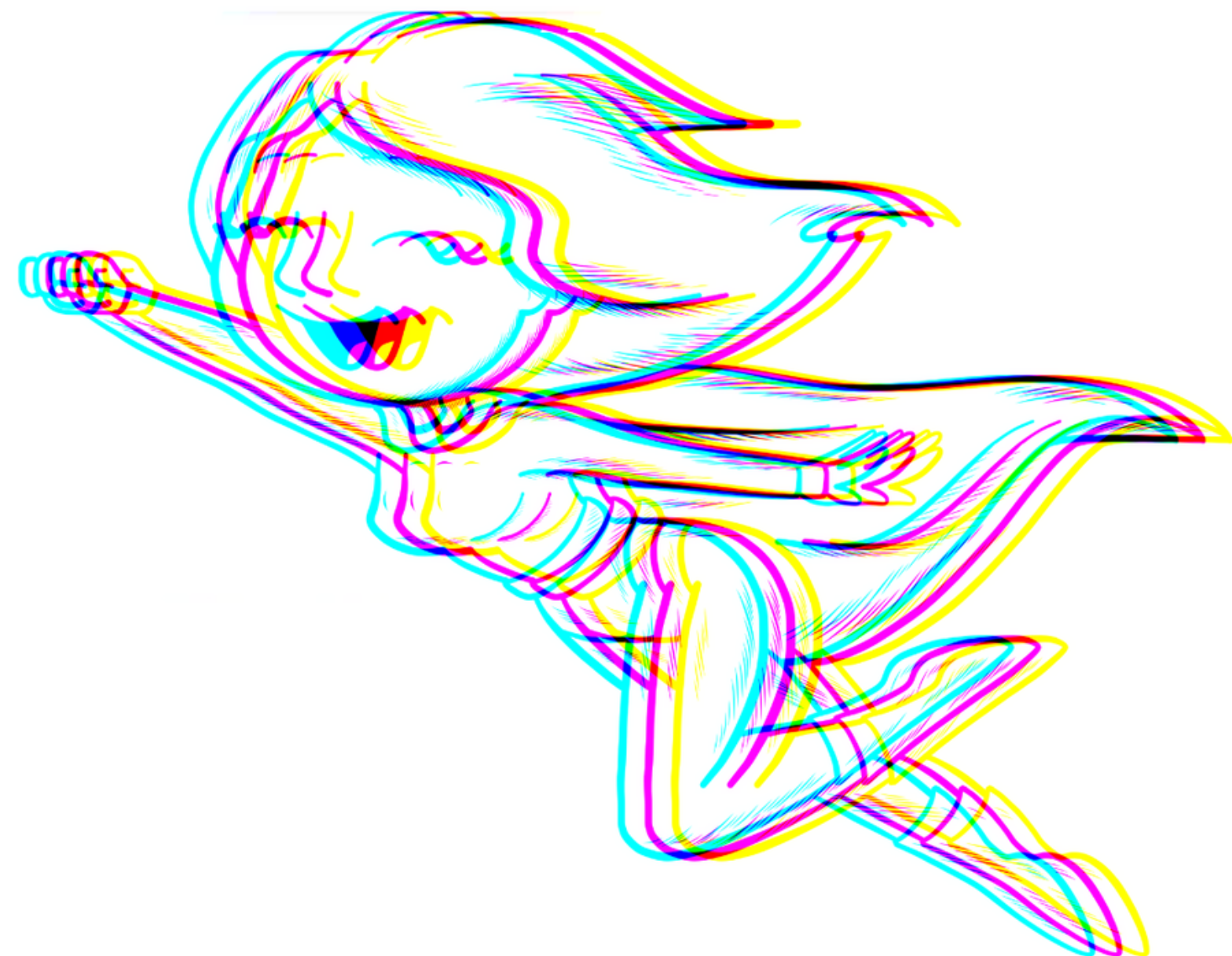


s o u p

s o a p

**s i t t i n**  
**s i t t i n g**

a c t  
c a t



s o u p

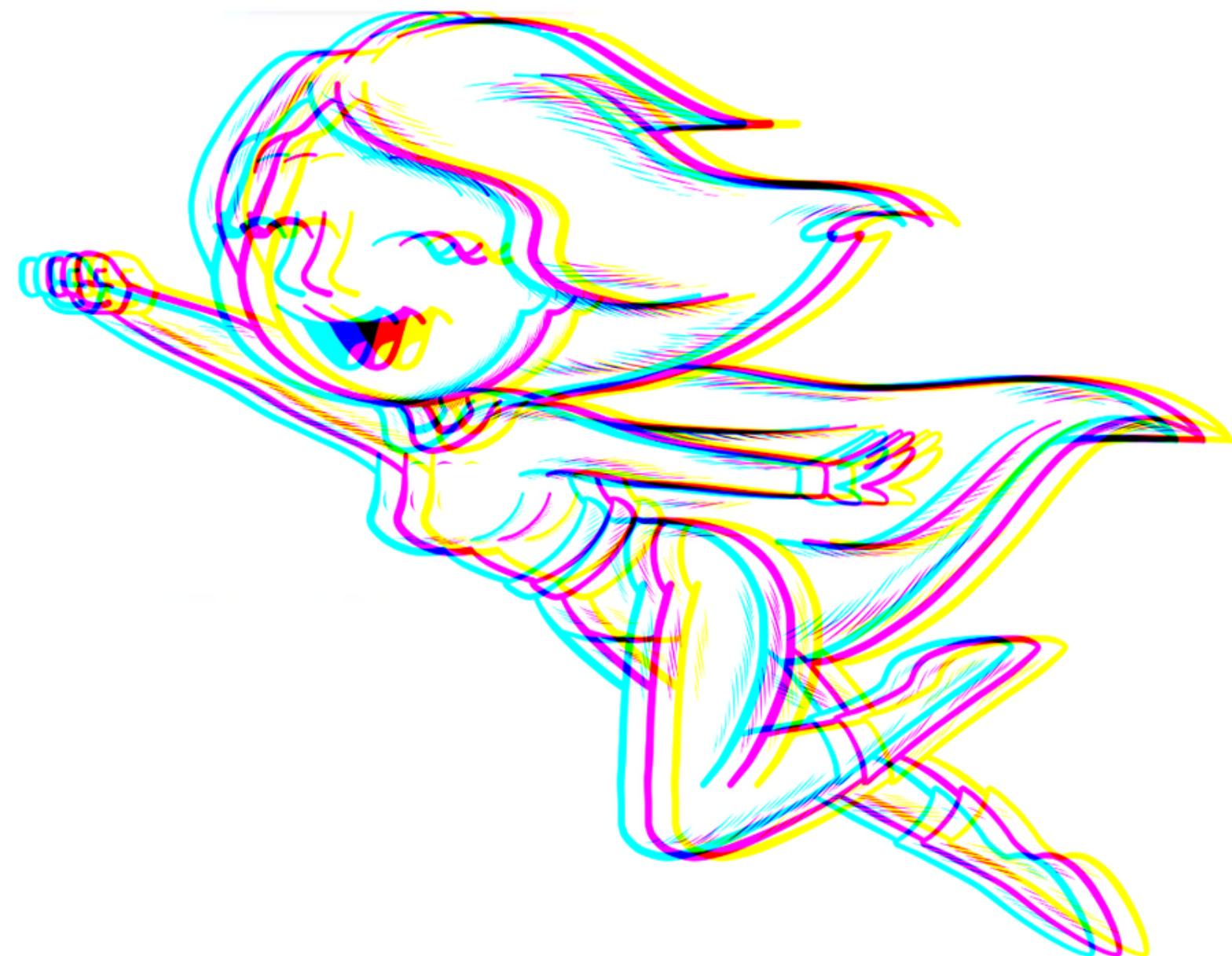
s o a p

d e s s e r t

d e s e r t

a c t

c a t



```
client.search(  
  index="recipes",  
  body= {  
    "query": {
```

```
    }
```

```
  }
```

```
)
```

```
client.search(  
  index="recipes",  
  body= {  
    "query": {  
      "match": {  
        "ingredient": "chicken"  
      }  
    }  
  }  
)
```

```
client.search(  
  index="recipes",  
  body= {  
    "query": {  
      "match": {  
        "title": {  
          }  
        }  
      }  
    }  
  )
```

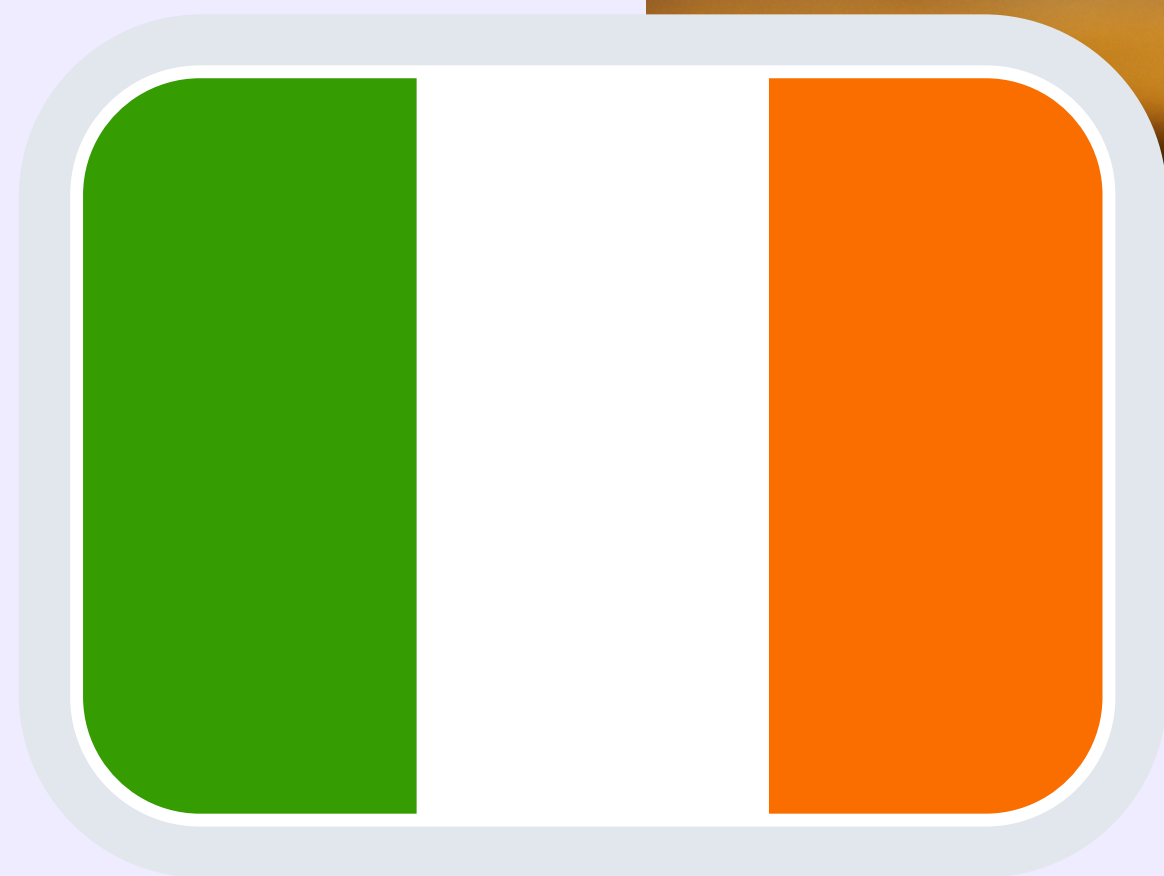
```
client.search(  
  index="recipes",  
  body= {  
    "query": {  
      "match": {  
        "title": {  
          "query": "Desert",  
        }  
      }  
    }  
  }  
)
```



```
client.search(  
  index="recipes",  
  body= {  
    "query": {  
      "match": {  
        "title": {  
          "query": "Desert",  
          "fuzziness": 1  
        }  
      }  
    }  
  }  
)
```

Mango and Melon Dessert  
Room 4 Dessert Sour  
Room 4 Dessert Sour  
Dessert Pancakes with Custard and  
Berries

**"AUTO"**



# DASHBOARDS



Search

DQL



Last 15 minutes

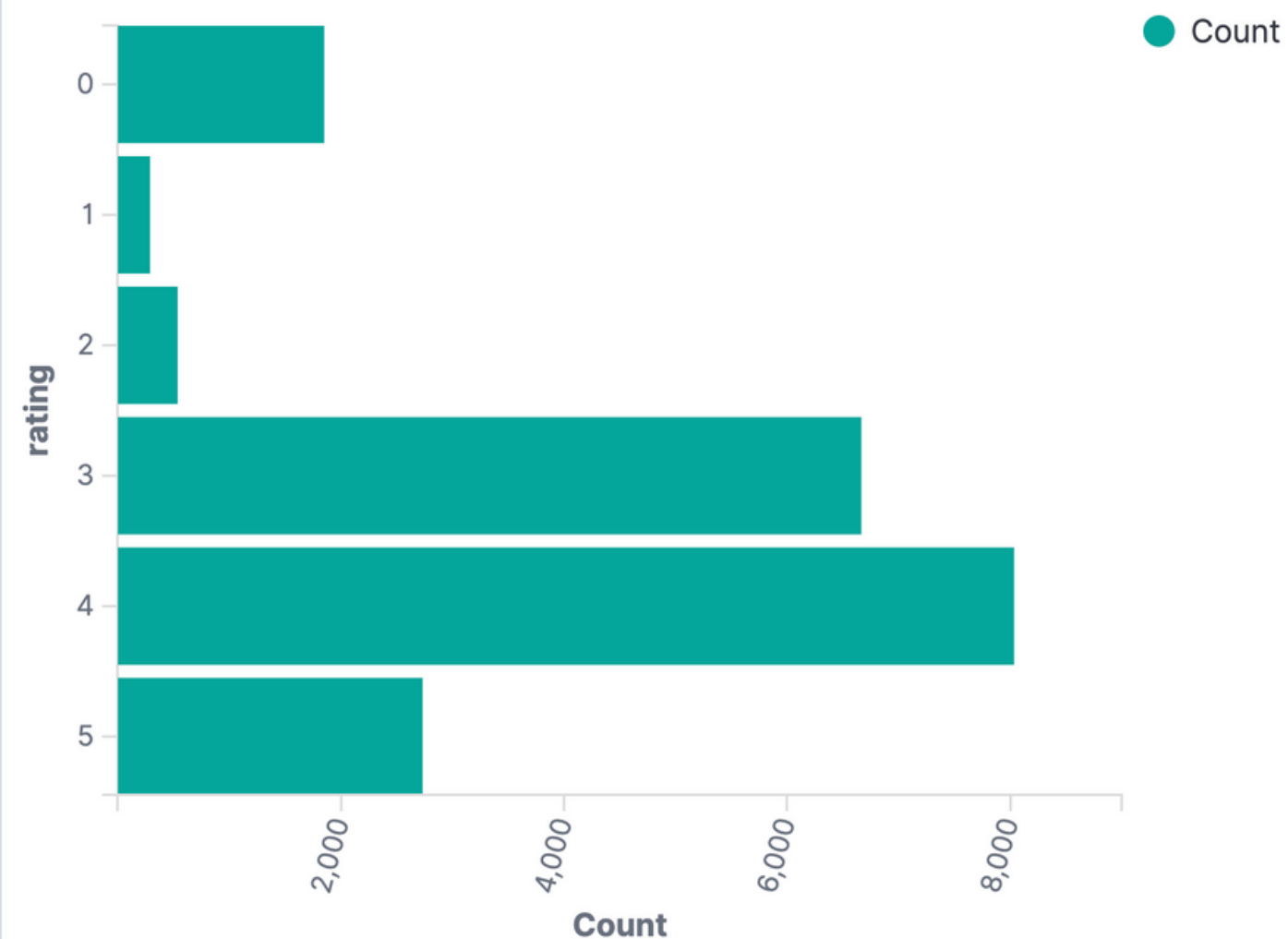
Show dates



Refresh

+ Add filter

### Ratings



### Categories



categories.keyword: Descending - Count



# THANK YOU!!!



Feel free to ask questions or let's connect!

@aiven\_io

@laysaucha



GitHub repository

MANAGED AND HOSTED

## Aiven for OpenSearch®

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